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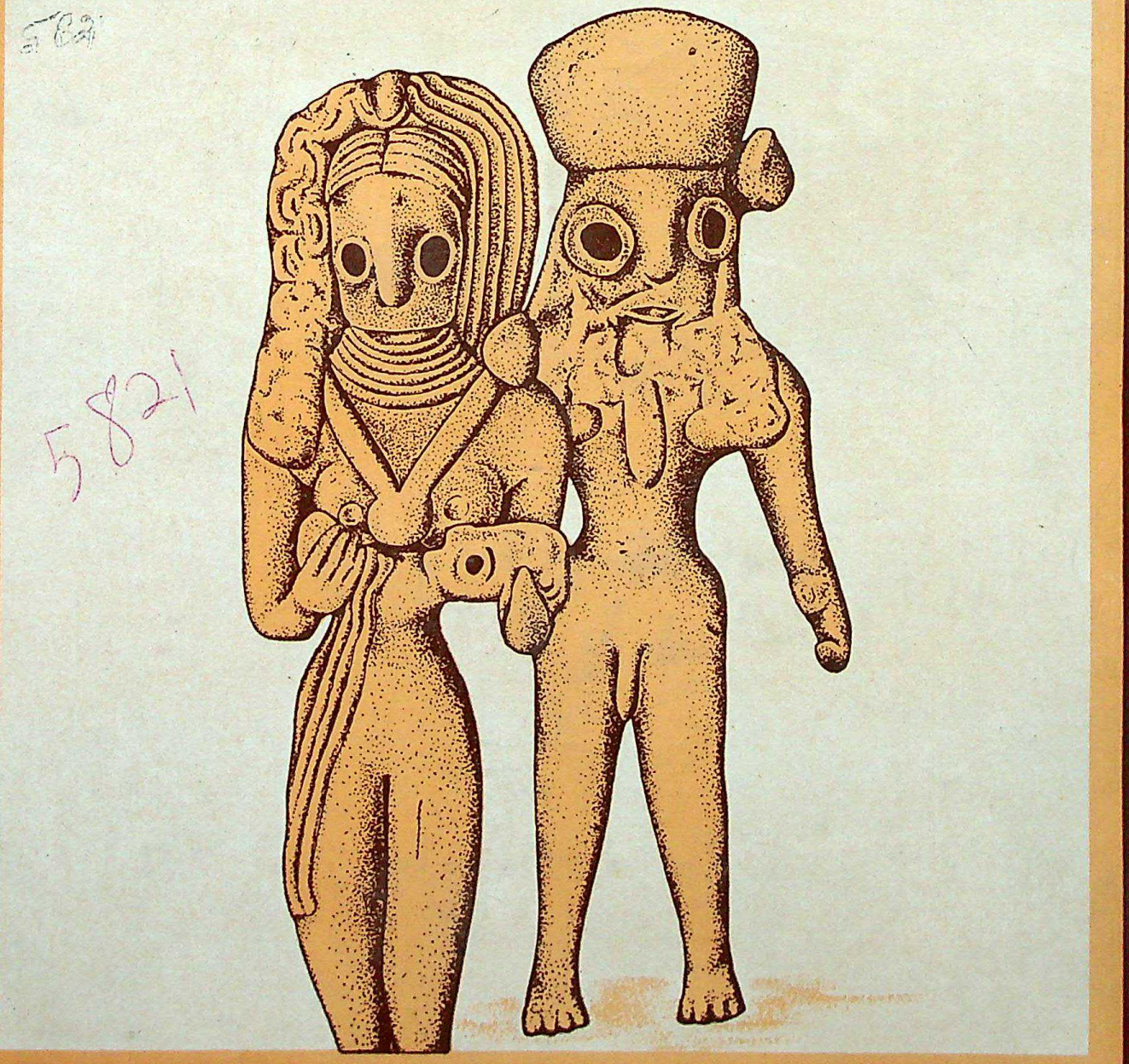
# PRE-HARAPPAN CULTURES

## OF INDIA AND THE BORDERLANDS



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# Pre-Harappan Cultures of India and the Borderlands

SHASHI ASTHANA

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*Dedicated to the memory of*
*the late Dr. Shyama*
*&*
*the late Dr. V.P. Dwivedi*

*First published 1985*

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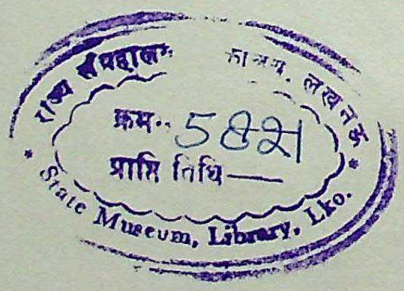


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# FOREWORD

This book by Dr. Shashi Asthana is a constructive and stimulating attempt to set the study of the pre-Harappan cultures in a comprehensive framework. It is the first book presenting an extensive review of all the data related to the pre-Harappan cultures, providing us with a clear synthesis of the most recent discoveries in India and in Pakistan and trying to evaluate their significance to understand the formative processes of the Harappan civilization. Dr. Asthana shows well that the notions of dependence and cultural backwardness which, until recently, were still widely used in the interpretation of the prehistory of South Asia, are no longer valid in the light of the new discoveries of these past few years. Her analysis also points out well the limits of the concept of an "Early Harappan" phase which has been developed a few years ago by M.R. Mughal. Some viewpoints in this book are necessarily controversial and will be modified and supplemented when more information comes out from the ongoing fieldwork in India and Pakistan.

Dr. Asthana has stressed that the recent discoveries at Mehrgarh give substance to the hypothesis that some sites in Baluchistan, in particular in the triangular lowland embayment of Kachi, physically part of Sind, also played a dominant role in the shaping of the urban civilization of the Indus valley. It can be easily guessed that I share this viewpoint. But since Dr. Asthana has kindly requested me to write a few comments based upon our most recent work at Mehrgarh, I shall take the opportunity of this foreword to add a few informations which may supplement some of the points discussed in this book.

The excavation of the Neolithic settlements at Mehrgarh has been considerably extended and buildings in mud bricks belonging to the late aceramic horizon and to the 6th millennium phases, associated with the first coarse ware (periods IB-IIA), have now been exposed over a surface of more than 6000 sq. meters, providing us with a more extensive picture of an already elaborate and complex socio-economical organisation. More graves containing a wide diversity of ornaments and goods have been exposed. Early graves, just above the natural soil, yielded beads and pendants in lapis lazuli, turquoise, black steatite and sea-shells; two of the deads were buried, each of them, with five very young goats. The occurrence of such large number of kids, in a context where hunting activities are still a dominant feature of the subsistence pattern, is an element of great significance for understanding the economic life and the funerary practices of people living in Kachi, in the very early 7th millennium B.C.

More informations are now available on the distinction between Neolithic and Chalcolithic at Mehrgarh since we have been able to extend the stratigraphical observation through a much larger area. The Neolithic itself has been divided in several phases. Period IA, with an accumulation of 7.50 m of deposits, is purely aceramic. These early deposits are partly overlaid by those of period IB, where one sees the first occurrence of a very limited number of sherds in a very coarse ware. With period IIA, in close continuity with the earlier phases, we notice an increasing number of potsherds in the same coarse ware, in the course of the 6th

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millennium B.C. Period IIB is marked by an improvement in the quality of the pottery due to a better tempering of the paste and to a more complete firing. Globular pear-shaped jars in a lustrous red ware are typical of this phase during which pottery is still produced in limited quantities. Though copper objects were found in greater number in the deposits of period IIB, metal is still used in a very restricated way which does not affect the bone and lithic industries, still remaining quantitatively and qualitatively, in the tradition of the earlier phases.

As regards pottery and as a further support to Shashi Asthana's argument in favour of an indigeneous development of crafts in Baluchistan, it is worth mentioning the presence of basketry impressions in the core of some of the earlier vessels in coarse chaff-tempered ware. We know that the aceramic levels have provided us with several examples of asphalted baskets. It appears that some of these baskets in the course of periods IB and IIA were coated with clay and fired to produce the first pottery known in Baluchistan. Period IIA represents a major episode of local outgrowth when massive buttressed walls support terraces overlooking by several meters the flood-plain and supporting rows of compartmented or cell-units buildings carefully built in mud bricks (one being preserved to a height of 3 meters) which were part of an impressive storing system. Studies by Costantini and Meadow indicate also that this period corresponds to the setting of what will be, some millennia later, the agriculture of the Harappan civilisation with an emphasis on the cultivation of cereals well adapted to flood-irrigation (*triticum* and *hordeum sphaerococcum*) and intensive cattle-breeding.

With Period III at Mehrgarh we reach a time which is slightly better known in Baluchistan since it corresponds to the occurrence of the Kili Gul Mohammad and Togau A pottery (a single pottery tradition with successive stages of evolution in the end of the 5th and early 4th millennium B.C.). This period, which represents a major step of increase in the craft activities due to the development of metallurgy, can be called "Chalcolithic" since it is marked by a sharp decrease in the bone and chipped stone industries. A few crucibles used for bun-shaped ingots of the size and shape of those found, a millennium and half later, at Mohenjo-daro and Lothal, have been recovered along with broken double spiral headed pins and even a fragmentary compartmented amulet in copper. Traces of metallic saw are visible on the section of shell bangles.

All these data from Mehrgarh show well, as Shashi Asthana has stressed it, that many of the elements—complex architectures, developed metallurgy, work of semi-precious stones such as lapis lazuli and turquoise, human figurines, compartmented seals, etc.—which were supposed to have been introduced in Baluchistan at the end of the 4th millennium by the bearers of the "Quetta" culture, did exist in the Kachi lowland long before. This last point brings out the difficult question of the origin of the "Quetta" culture. The author assumes that the spread of the "Quetta" ware, directly related to the Geoksjur style of south Turkmenia, is to be linked to a migration of people from the Tedzen Delta. This idea, supported by several specialists with some sound arguments, is consistent with the explanation relating to such migration, the foundation of Shahr-i-Sokhta and the expansion of Mundigak. In fact, sherds in a truly "Geoksjurian" style are very few at Shahr-i-Sokhta or at Mundigak, in spite of their conspicuousness. At Damb Sadaat, the "Geoksjur" motifs are painted on a fine whitish wheel-thrown pottery very different from the coarser, vegetal-tempered pottery of the Namazga III phase, mostly hand-made. The situation is to some extent similar at Mehrgarh where we have a wide range of pots decorated with "Quetta" designs but mostly in the fine grey ware, a

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local production, exported and imitated at Mundigak (period IV) and at Shahr-i-Sokhta (periods II-III). It seems to me that a systematic analysis of the "Hilmand Civilization" and of the sites of the Quetta plateau would indicate that we are dealing with too complex and composite entities for interpreting them as the result of a migration. It is worth noting that a few aspects of the culture of Shahr-i-Sokhta in the field of burial practices, craft techniques, material life and ideology, can be related to earlier traditions in Baluchistan or in south Afghanistan, as we know them from Mehrgarh or from Mundigak (periods I and II). Exchanges, influences and contacts between Turkmenia, eastern Iran and the Greater Indus system have no doubt played an important role in the shaping of the various cultural entities of these regions at the end of the 4th millennium but these phenomena were obviously multidirectional.

The question of relationship between the impressive sequence of developments in the Kachi plain, revealed by the excavations at Mehrgarh, and a fully urbanized site such as Mohenjo-daro deserves careful investigation. Shashi Asthana, after reviewing the last period of occupation at Mehrgarh, associated with vessels in painted grey ware, Sadaat III style or in Kot Dijian fabrics, says "after this period, Mehargarh was deserted and the people known as the Harappan are found settled at Nowsharo, a nearby site". There is indeed good evidence to support at first glance this statement, implying that an Harappan group moved from the Indus valley, founded Nowsharo and replaced the former culture of the region. The situation in the Kachi plain might have been in fact more complex, since Nowsharo was occupied before the mature Harappan period. Among thousands of mature Harappan sherds mixed with many sherds in wet ware, a good collection of sherds in Faiz Mohammad grey ware, in the Sadaat III style and fragments of Zhob-like figurines has been recovered. At Mehrgarh itself, we have recently isolated a final phase (VIIC) in the last period of occupation of the site. In this phase, the painted grey ware starts being replaced by the "bracketed-ware" and we see the occurrence of vessels in a sturdy red ware, of dishes-on-stand, of plain goblets shaped in series on a fast wheel, of big jars bearing string impressions and with splayed out rim, of painted motifs in black on a red slip which offer many parallels with what is known from the transitional phase of Kot Diji. On the basis of surface evidence, we can assume that such transitional phase must also have existed at Nowsharo and that the incorporation of the site within the Harappan system must not have been as dramatic as it could look at first. But we can think that the north of Kachi must have been to some extent marginal to what was the main scene of socio-economic transformations in the second half of the third millennium. Therefore one can regret that the cultural sequence of the south of Kachi, where the Nari, Bolan and Mula rivers merge in the Indus system, not far from Mohenjo-daro, is still poorly investigated. Near Gandava, close to the Larkana district, though still in the Kachi district, several sites have been spotted. The largest one, Pathani Damb covers many hectares and was a very big city during the Harappan period, but among millions of mature Harappan sherds, mixed with great quantities of sherds in wet ware, many fragments of vessels in Faiz Mohammad grey ware (with painted designs typical of Mehrgarh VII), in bracketed-ware and Sadaat II and III style are also visible on the surface. But the site was even occupied before since a sector of the huge mound was strewn with sherds in the K.G.M.—Togau A style, typical of period III at Mehrgarh. It is interesting to see that a major Harappan site, such as Pathani Damb, was already occupying around 4000 B.C. by people, culturally similar with the inhabitants of Mehrgarh at that time. It is important to stress that Pathani Damb, like the

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nearby site of Kotra, was already a prosperous settlement at a period, as we have already said it, in relation to Mehrgarh III, which represents a major step in the setting of several major components of the Harappan civilisation, as far as craft and farming techniques are concerned. We also have to consider the fact that the south of Kachi is still to-day a major area of flood-irrigation whose origin, apparently, could well go back to a Neolithic-Chalcolithic horizon when the staple crops of the Harappan period started to be cultivated on a large scale.

The question to be asked now is to know if an Harappan population moved from the nearby Indus valley, possibly from Mohenjo-daro, took over the control of Pathani Damb and turned it out into a major city. In the same process, the Harappans would have founded Judeirjo-daro, another large site, in the south of Kachi, near Jacobabad. It is worth pointing out that Judeirjo-daro has also yielded in association with mature Harappan sherds a fair number of sherds in wet ware, similar to the wet ware of Mehrgarh VII, Nowsharo and Pathani Damb. The other alternative answer would be to consider that in the transformation of a site such as Pathani Damb, an internal factor of outgrowth played also an important role. It is difficult to answer as long as the lower deposits of Mohenjo-daro, to-day under the water-table, have not been investigated. But it is however important to point out that sherds in wet ware have been recovered from this earlier levels, as Mughal has stressed it.

The mechanism which lead to the emergence of major cities as Mohenjo-daro and other Harappan towns is complex. Many elements have to be accounted for to understand this process, among which the colonization and development of large tracts of lands in the Punjab, Rajasthan or Cholistan where many sites associated with the Kot-Diji-Sothi ware have been recorded. But we can also be convinced, as Dr. Shashi Asthana shows it very well in her study, that the socio-economical and cultural features we have evidenced in the north of Kachi, with obvious parallels in the south of Kachi, in the time-span of a few millennia, played a major role in the shaping of the urban civilization of the Indus valley, to an extent that the incorporation of Kachi within the Harappan system was probably not felt by local people as a break and a conquest by an alien population. Through the course of the 3rd millennium, we have a shift towards the flood-plain of the Indus of the main centers of wealth control and innovation, affecting the settlement pattern of the whole Kachi area, with the foundation of new sites, the development of some other ones and the abandonment of a few others. It would therefore be perhaps misleading to imagine the existence of an Harappan population very distinctive of indigenous groups within the Indus system. It is better to imagine that the Harappan civilization is the synthesis of many formative elements which explain the diversity of the so-called "Harappan" population. In that respect it is significant to see that Mohenjo-daro has yielded hundreds of terracotta human figurines (figurines were produced by thousands at Mehrgarh) and Kalibangan or Lothal almost none. It would be easy to give many other similar examples showing that behind the uniformity of the material culture, we have also a diversity reflecting the existence of various groups integrated within a Harappan system which is still poorly understood. Nevertheless this last point agrees with Dr. Shashi Asthana's analysis considering as misleading the concept of an early Harappan population, mostly associated to the Kot Diji or related Sothi culture, who would have been the direct ancestors of the mature Harappan people, excluding from the process of the shaping of the urban civilisation, other groups, living within the Indus system in zones physically closely related to the Mohenjo-daro area, and where flood-irrigation had been carried out successfully for millennia.

JEAN-FRANCOIS JARRIGE

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# PREFACE

There has been a general awareness amongst archaeologists about the pre-Harappan cultures of South Asia for more than half-a-century mainly because of the detailed publication of the results of explorations conducted by Sir Aurel Stein, N.G. Majumdar, B. DeCardi and Walter Fairservis Jr. in Sind and Baluchistan and the writings of Stuart Piggott, particularly, *Prehistoric India.* However, even though Marshall clearly hinted at the Indianess and Indian origin of the Indus Valley Civilization as early as 1924, the status of the pre-Harappan cultures vis-a-vis the Indus or Harappan Civilization remained largely amorphous because there was no solid enough archaeological evidence for it. These cultures therefore did not create the expected global interest. Fortunately, in 1955, the pre-Harappan site of Kot Diji was selected for proper excavations by F.A. Khan since here was a chance to solve the riddle of the birth of the Indus Civilization—whether it lies in one or more of the known pre-Harappan cultures of Sind and Baluchistan or in the Mesopotamian Civilization ? The results were quite startling—a number of Harappan type objects were found in different levels of pre-Harappan Kot Diji Culture. In 1961 B.B. Lal and B.K. Thapar found the same situation occurring at Kalibangan. In 1964 A. Ghosh reviewed the data of pre-Harappan cultures and hinted at the possibility of generic relationship between some Harappan and pre-Harappan antiquity types. In 1970 M.R. Mughal submitted his Ph. D. dissertation in which he used the term 'Early Harappan' for the Kot Diji culture, implying thereby that the Indus Civilization *directly evolved* out of the indigenous Kot Diji culture-complex. Unfortunately, this very important piece of research has remained unpublished.

But as the dust was just settling down, the news of another startling discovery, that of Mehargarh (spelt as Mehrgarh by the excavators) on the Bolan Pass, by J.F. Jarrige, came in 1976. It immediately opened many new questions and promised fresh possibilities regarding the status of various other pre-Harappan cultures of Sind, Baluchistan and Punjab since most of the technological innovations normally considered as typically Harappan were present in fully standardized forms in the Period III levels (4000 B.C.) of this site.

In 1976, therefore, I set myself for a fresh study of the pre-Harappan cultures of India and Pakistan in the widest setting possible—Iran, Iraq, Soviet Central Asia and Afghanistan. A year at the Institute of Archaeology, London with David Oates, Professor of West Asian Archaeology, I got the opportunity to look at the issue from the West Asiatic point of view. In 1977 it was also possible for me to visit various sites, including the site of Shahr-i Sokhta and also important museums in Iran and Iraq to collect relevant data. In 1978 I could visit a dozen American universities and museums where a considerable amount of West Asian, Baluchi and Sind materials, both explored and excavated, are housed. The results of these few years' work were re-tested in India in the light of fresh discoveries.

The present monograph, therefore, summarizes eight years' work and thoughts on the pre-Harappan cultures in India and the western borderlands.

* * * * *

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To present the sources of the materials made available to me by various scholars, I would mention the following few facts.

The material from Shahr-i Sokhta was studied at ISMEO, Rome; from Tepe Yahya and from sites in Baluchistan explored by Aurel Stein at the Peabody Museum, Harvard University, Cambridge, U.S.A.; from Bampur in the Birmingham Museum, Birmingham, U.K.; from Tal-i-Iblis in the University of Georgia, Athens, U.S.A.; from Uruk and Nal in the Institute of Archaeology, London; from the Pre-Harappan sites in Pakistan in the Faculty of Oriental Art, University of Cambridge, U.K.; from various sites in Quetta and Zhob regions in the American Museum of Natural History, New York, U.S.A.; from the various Mesopotamian sites yielding Jemdet Nasr Polychrome and Scarlet Wares in the Iraq Museum, Baghdad; from Sialk and Hissar in the Iran-Bastan Museum, Tehran.

* * * * *

During these long years, the list of those who helped me in India, West Asia, Europe and America is indeed very long still if I do not mention the following few names, I would be grossly failing in my duty. Prof. David Oates, Dr. F.R. Allchin, Dr. B. Allchin and Dr. I.C. Glover helped me most during my stay in U.K. Prof. C.C. Lamberg-Karlovsky, Prof. G.F. Dales, Dr. Jim Shaffer, Dr. G.L. Possehl, Dr. Henry Wright, Dr. Richard Meadow, Mr. Richard Lanier and, Mrs Maureen Liebl provided me all possible facilities during my stay in U.S.A. Dr. N. Postgate and Dr. Muyyad extended full support during my work in Iraq. Dr. Sandro Salvatori and M. Vidale came forward to help me in every possible manner during my stay and visit to sites in Iran, particularly Shahr-i Sokhta, and the examination of the unpublished material from Shahdad. Prof. M. Tosi was kind enough to show me the material from Shahr-i Sokhta housed presently in the building of ISMEO, Rome. I am grateful to all of them.

In India I am beholden to Prof. B.B. Lal, Prof. D.P. Agrawal, Shri R.S. Bisht and Shri G.B. Sharma; discussions with them were indeed most helpful in clearing various doubts.

I owe a debt of gratitude to Dr. S.P. Gupta for his invaluable guidance at every stage of the preparation of this book. Without his constant help the present study would not have been possible. I am equally grateful to Dr. J. F. Jarrige for writing this very valuable foreword to the book.

In the publication of this book those who extended their full cooperation are Shri S. Ganesh Rao, who has also very kindly prepared the index; Shri Sudhakar Sharma and Shri R.K. Sharma who have seen parts of the proofs; Smt. Anamika Pathak who has checked some of the vital references; Shri S. Shankaran and Shri J.C. Grover who typed the manuscript; Sarvashri Lalit Jain and M.S. Mani who have done the graphics and Shri N. Shah who has done part of the photography. I am thankful to all of them. Shri Jain has also made the lay-out and designed the jacket.

To Shri I.M. Sharma of Books and Books and his family I shall never have adequate words to thank since they, during the last decade, treated me as a member of their family and finally undertook the publication of this book.

15th March, 1985
National Museum,
New Delhi.

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# LIST OF ABBREVIATIONS

| | |
|---|---|
| AI | Ancient India |
| DS | Damb Sadaat |
| IAR | Indian Archaeology, A Review |
| KGM | Kile Gul Mohammad |
| KLB | Kalibangan |
| PA | Pakistan Archaeology |
| RG | Rana Ghundai |
| SJ | Sur Jagal |

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# INTRODUCTION

LITTLE did Wheeler realize, when in 1968 he published the third edition of *The Indus Civilization*, that within two decades, such a large amount of archaeological data was going to be unearthed that despite various merits of the book, it will become more or less redundant. In fact, it has now become imperative to write a full monograph on pre-Harappan cultures in South Asia in a framework Wheeler hardly visualized. In fact, except for Amri, Quetta and Zhob and a few other cultures in Baluchistan, none was taken by him as pre-Harappan. In the Punjab, Sind and Rajasthan none was known.

We now know that slowly and gradually the new data started speaking in terms of long sequences of pre-Harappan cultures not only in Baluchistan but also in the plains of the Indus system. Significantly enough, these new sequences of pre-Harappan cultures have not only revised the theories of Piggott, Gordon and Wheeler but also of Sankalia, Allchin and Fairservis—three other well known writers on South Asian archaeology. Here an attempt has been made to present the new picture of pre-Harappan cultures that has emerged during the last three decades in India and Pakistan.

The new picture clearly shows that the plains of the Indus system were not *tabula rasa* before the Indus Civilization emerged; more than a millennium before it the land was inhabited by human beings. This new picture also shows that Baluchistan was just not a land of refuge for the Iranians, people lived here continuously from the seventh millennium B.C. *i.e.*, several millennia before the eastern plateau of Iran developed village cultures using painted potteries.

Although opinions are divided on the birth of Indus Civilization yet it has now been amply demonstrated that it was conceived locally in the courtyard of one or more of these pre-Harappan cultures. We, therefore, know atleast about the directional changes in the culture-growth of this region—it was indigenous and not inspired by foreign elements.

So far the hilly region of Baluchistan was treated as a corridor which transmitted cultural influences from the west to the east. The entire history of culture-growth in this region was understood in terms of Iranian nomadic migrations. Baluchistan because of its difficult terrain and dry climate was considered a secondary or refuge zone for the Iranian chalcolithic people who were defeated and uprooted by the Aryans coming from northern Iran and Central Asia. Since it was not considered a primary zone, scholars did not pay much attention to the pre-Harappan cultures. Probably it was not entirely their fault since they did not have any Mehargarh before them; sites with long sequences of cultures were just not known to them. We have now sites going back as far back in time as seventh millennium B.C. in Baluchistan.

After Piggott and Gordon, Mughal collected and synthesized the pre-Harappan cultures in his monograph entitled *The Early Harappan Period in the Greater Indus Valley*. However, the scope of this work was also limited. He deals neither with southern Baluchistan cultures

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nor with the early food-producing cultures (neolithic) of northern Baluchistan; whereever he talks about them, he talks only marginally. Further, he did not try to reconstruct the developmental chart of autochthonous Baluchi cultures. His primary concern was to trace the original home of the Kot Diji culture which he designated 'Early Harappan', especially in Zhob and Loralai Valleys of northern Baluchistan. Here we have tried to place Baluchistan in its proper historical perspective of a Nuclear zone: its inception and its capacity to grow and expand in time and space, its capacity to absorb alien elements and its ability to interact with other cultures in equal terms. A close look at the materials from this region clearly shows that there is not much in the cultural milieu which is characteristically and exclusively West Asian except for some pottery motifs, especially zoomorphic, *e.g.*, caprids, ibex and birds. These animal and bird motifs are, however, widely distributed over a long span of time and space. They occur widely in nature in this part of the world. Their occurrence is attested on the potteries of Iran, (Hissar, Sialk, Bampur, etc.), Baluchistan Mehargarh, Damb Sadaat, Zhob, Togau, etc.) and the Indus Valley. In different regions they occur at different times and in different forms.

Before the discovery of Mehargarh, all the classical wares in Baluchistan: wheel-turned bichrome, polychrome and grey ware were considered as diffusionistic traits coming from Mesopotamia and Iran. Now we know these views were superfluous.

These Wares were locally produced in much earlier contexts in Baluchistan than the context in which they occur in West Asia. Not only that, each ware does not constitute a culture; Piggott made that kind of mistake. Many of these wares were found together which establishes the fact that it was basically a matter of co-existence of various fashions in pottery. Baluchistan in fact had the same fate which Anatolia had. Prior to the discovery of very early neolithic sites, no one ever imagined that Anatolia was a nuclear zone of early cultures. As late as 1955 Seton Lloyed (1956:53) observed, "The region more correctly described as Anatolia shows no sign whatever of habitation during the neolithic period." For decades it was treated as a secondary zone where culture arose only when people came from outside. Only the discovery of Aceramic Neolithic at Hacilar in 1956 could bring about change in their views. The pre-ceramic and early ceramic neolithic sites of Mehargarh in the Bolan basin and Koldihwa in the Ganga basin respectively have done exactly the same. Two nuclear zones developed in India, completely independent of each other; one in the piedmont region of Baluchistan, while the other in the plains of the Ganga. However, the story of their developmental stages have not been the same due to various environmental and cultural reasons which have been discussed in this monograph at proper places. The excavations at Mehargarh in fact proved a turning point in the history of Indo-Turkmenian relations. Sometime back it was generally held that around the fall of the fourth millennium B.C. the south Turkmenians colonized the Quetta Valley and in evidence Damb Sadaat II was quoted. However, Mehargarh VI, a contemporary of Damb Sadaat II, shows that the advanced centres like Mehargarh still remained largely uneffected by the Turkmenians. How and why things like that happened have also been tackled in this work.

South Baluchi cultures such as Amri, Nal and Kulli have been re-studied here in the light of recent discoveries. These are being provided not only with longer chronologies but also being freed from many ill-founded views about them. Neither the Polychrome ware is now connected with the Jemdet Nasr Polychrome nor Kulli is obliged for its birth to Scarlet Ware of Mesopotamia. It is now more than clear that all of them originated locally in Baluchistan,

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probably in northern regions. But do we know enough how cultures moved from north Baluchistan to south Baluchistan? Possibly not.

And lastly the terminology. The term pre-Harappan has been used by Lal, Thapar and few others for the Kot Diji-Sothi complex as it was used since Majumdar's time for Amri, Kulli, Nal and similar other cultures. Mughal has, however, preferred the term 'Early Harappan Culture', for the Kot Dijian culture-complex as he is of the firm opinion that it represents the formative stage of the Harappa Culture. He believes that the Harappan culture evolved out of the Kot Dijian, which of course, includes many regional variations. Indian archaeologists, however, provide these cultures a different status. According to most of them, the Harappan Culture represents a distinct cultural identity and when it arrived the pre-Harappans were inhabiting the plains of the Indus system. In the light of this controversy the problem of terminology has also been discussed.

In Baluchistan, a fully developed Bronze Age Culture other than Kot Dijian was flourishing at Mehargarh, just before the advent of the Harappans in this area. Then almost all of a sudden the Baluchi settlements started declining. Did a large part of the population was absorbed in the Harappan towns, some of which are trading-posts on major trade routes, such as Nowsharow and Dabarkot? Some thought has been given to this problem also.

It appears that the pre-Harappan towns did not form part of complex trade net-work of the fourth and third millennia. Their requirements of luxury items, like lapis and turquoise, may have been met only through the nomads as Shaffer feels. The presence of such items may not always be interpreted as imports through regular trade as we have a lot of lapis and turquoise in the early phase of Mehargarh when the question of well organized trade hardly arises. But this is only one aspect of the economic problem. What about other aspects? They will also be discussed in the light of recent archaeological discoveries.

The monograph has five major chapters which deal with the process and dynamics of culture-growth in Baluchistan, Indus-Ghaggar System and Ganga basin. It provides complete documentation of pre-Harappan material cultures of this vast and varied region. Neolithic-Chalcolithic of Soviet Central Asia and Aceramic Neolithic of West Asia have also been presented to provide contextual material for proper understanding of the Baluchi pre-Harappan cultures.

The first chapter deals with the geography of Baluchistan and the Indus-Ghaggar system. A quick survey of Baluchistan has shown that the area was always watered by perennial rivers, albeit with narrow channels and restricted flood-plains, which were sufficient for the growth of early food producing cultures. But how these hilly cultures moved down the hilly and piedmont tracts and developed new dimensions leading eventually to the birth of urban cultures or the Indus plains has been one of our major concerns here. It also presents a synthesis of the research done by various scholars in various regions during the last three to four decades. Here several old and recent excavations and explorations have been taken care of. We have shown how in the past the early Indian cultures were understood only in terms of West Asiatic setting. All Baluchi Cultural traits have been considered in the framework of Iranian nomadic migrations. These diffusionistic views, boldly held by Piggott, continued for a long time and these might have lasted longer if Mehargarh had not come to light which has yielded extensive remains of a Pre-pottery neolithic settlement followed by ceramic neolithic villages and Chalcolithic towns in sequence, setting aside all claims of older writers. This discovery has proved beyond doubt that what was Zagros for West Asia, the same was Sulaiman for

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South Asia. Both the mountain ranges and their piedmont regions provided excellent fauna, flora, climate, water resources and trade routes for the birth and growth of early sedentary cultures in 8000-6000 B.C. bracket.

The second chapter consists of three major areas of study. The first presents a survey of Aceramic Neolithic Cultures in West Asia. Almost all the Aceramic Neolithic sites distributed over a wide area from Levant to the Zagros have been included in this survey. The idea is to place the Mehargarh evidence which has completely revolutionized our ideas regarding the first phase of Indian Civilization in perspective of the total evidence as it comes from the oriental regions. The second deals with the Soviet Central Asian Cultures since it has now been generally agreed that the dynamics of Baluchi Cultures cannot be properly appreciated without the intimate knowledge of Soviet Central Asian Cultures. The third demonstrates the developmental stages of various pre-Harappan Cultures in Baluchistan and Indus-Ghaggar system. The limitations of this chapter is conspicuous as it depends mainly upon the data received from Mehargarh. The data received from other sites in Baluchistan are by and large fragmentary which can only be quoted as supporting evidence. Three commonly known developmental stages—Neolithic, Chalcolithic and Bronze Age—are being clearly demonstrated in the whole area. An attempt has been made here to reconstruct the past-as-it-was from the seventh through the third millennium B.C. in this area. The chapter deals with three physiographic zones: northern Baluchistan, southern Baluchistan and the Indus-Ghaggar system. Northern Baluchistan was the nuclear zone where man seems to have changed from the hunting-gathering stage to the food producing-herding stage first. The area was inhabited right from the seventh millennium B.C.; desertion started just before the advent of the Harappans.

Southern Baluchistan also witnessed the birth and growth of a number of pre-Harappan cultures: Amri, Nal, Kulli, etc., around 3300 B.C. However, their formative stages still remain unexplored. But the probability of their being derived from northern Baluchistan cannot be ruled out; in fact that is what has been proposed. May be, some day we get the transitional phases of these cultures, possibly in Kalat region.

The third potential area, discussed in this chapter is the Indus system. Three phases are represented here: Neolithic (Sarai Khola I, Jalilpur I, Gumla I, etc.), Pre-Harappan (Amri, Kot Diji, Kalibangan I or Sothi, Siswal, etc.) and Harappan. Of these, the first two phases, which possibly represent some sort of colonization, also have been discussed. The last phase of the Harappan is beyond the scope of this book. An attempt has been made to show that the neolithic cultures were taken over by the pre-Harappan people, some of whom had migrated from Zhob-Loralai area of northern Baluchistan, to Sind and Rajasthan.

The third chapter presents the summaries of the results of the excavated sites. It also consists of the complete documentation of material culture of pre-Harappan times in India and Pakistan.

The fourth chapter deals with the mode of cultural interaction at different levels of time and space, as well as nature and quantum. Three types of interaction have been discussed:

1. Intensive, *i.e.*, regional interaction (within 100 km radius; studies based mainly on pottery),
2. Marginal, *i.e.*, extra-regional interaction (with distant lands; studies based mainly on luxury items since long-distance trade played an important role in this sort of interaction),

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3. Pressure contact situation, *i.e.*, situation in which due to some unknown reasons people migrated in groups from their homelands to various alien lands and settled there. For example the South Turkmenians in Quetta Valley. These unknown reasons may be for example hydrological and pressure of population growth.

The fifth chapter deals with chronological framework and cultural sequence of the pre-Harappan Cultures. So far Mundigak alone was treated as the key-site with complete sequence of Baluchi Cultures and the dates of other sites were fixed against this sequence. Now that Mehargarh has yielded a longer sequence it has replaced Mundigak in this regard.

Appendix at the end presents the Ganga-Vindhyan region which also is likely to have witnessed the birth and growth of the Neolithic as early as the sixth millennium B.C. But as it developed in relative isolation, it could not reach beyond the early Chalcolithic level of Culture-growth. The Ganga Valley had no urban culture contemporary to the Harappan culture.

In this monograph some definite points have been highlighted, for example in South Asia there were at least two nuclear zones of neolithic cultures—one in northern Baluchistan (Bolan basin in particular) and the other in Ganga-Vindhya flat lands (Ganga basin in particular). Due to the exposure of the former to West Asian and Central Asian Cultures seem to have achieved higher grade than that of the Ganga-Vindhya Cultures. Baluchistan produced a longer sequence of cultures which slowly and gradually rolled down the hills and gave birth to the first cultures in the Indus basin. And finally, it appears that some of them at some stage of their development got transformed into the Bronze Age Harappan Culture. But this has yet to be clearly worked out.

Lastly, it is now more than clear that Baluchistan was not only a nuclear zone of several pre-Harappan Cultures, it also served as a barrier to mass infiltration of the West Asian Cultures, protecting in the process the autochthonous nature of these cultures. Some feeble alien waves did come but soon got completely assimilated in Baluchi cultures and could never reach the Indus proper.

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# PREVIOUS WORK AND APPROACHES 1

THE area, covered in the present study, could be classified under three basic landscapes: Hilly, Piedmont and Plains (Spate and Learmonth 1960; Scholz 1982-83: 13-18). Piedmont zones and plains, watered by perennial rivers, provided vast alluvial formations for intensive cultivation, a basic resource for the rise of civilization. The hilly region, on the other hand, provided metals and minerals, necessary for the technological advancement of the people. Our area includes two important regions: Baluchistan and the Indus plains. Baluchistan is further divided into two physiographic zones by Bolan river: northern Baluchistan and southern Baluchistan. It is framed on the south by the Arabian Sea, on the north by the hills of Afghanistan, on the west by the high plateau of Iran, and on the east by the flat lands of Sind and Punjab.

*Fig. 1.1*

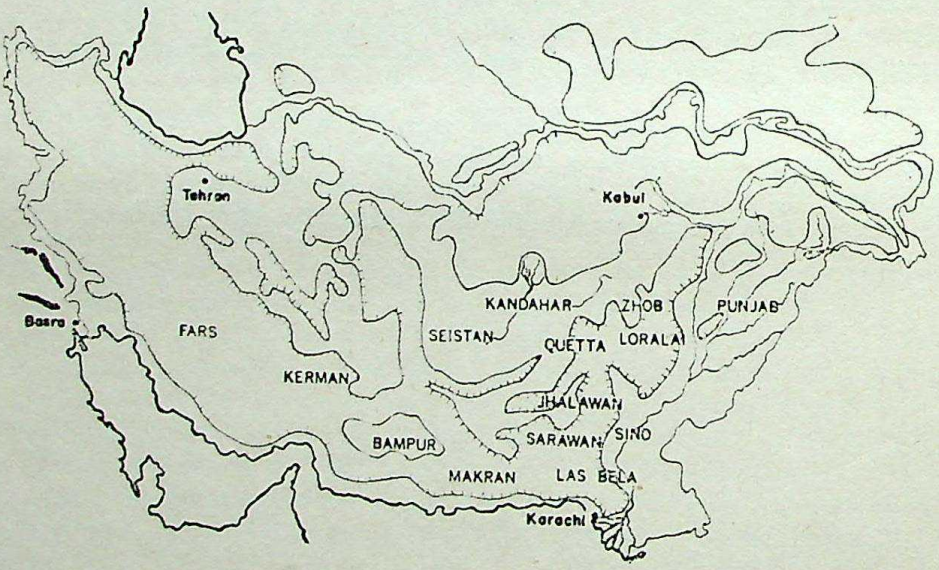


Fig. 1.1. Map showing major geographical regions.

The Sulaiman and Kirthar are the two major mountain ranges, running north-south, which form the dividing line between Baluchistan and, Punjab and Sind. Baluchistan, a land of arid basins and hills, is, in a sense, the eastern extension of the Iranian Plateau. However, the river valleys located in the hilly areas provided some alluvial plains for cultivation which could sustain a limited population living largely on subsistence economy; the phenomenal growth of a few of them, like Mundigakians depended on resource mobilization in the form of substantial

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imports of food grains, etc. from neighbouring regions.

Northern Baluchistan, generally north of the Bolan river, constituted the Zhob, Loralai, Pishin and Kachhi areas and is marked by Gomal river as its northern boundry. Southern Afghanistan through which the Helmand flows with sites like Mundigak in the Kandahar region is generally included in northern Baluchistan. Northern Baluchistan is geographically different from the hilly regions of southern Baluchisthan. Southern Baluchistan, of the river valleys of Kej, Rakshan, Dasht, etc. and the great coastal region of Makran, has Hingol as the largest river but even this does not provide resources to sustain the everyday life of large population at any particular place along its banks.

The second important region for the present study is the area of the Indus system, divided into five physiographic zones: Sind, Punjab, trans-Indus region, Indo-Gangetic Divide and eastern desert fringes, each one providing large tracts of fertile land.

The region of Sind is watered by the lower Indus. It starts below the meeting point of the five tributaries of the Indus: the Jhelum, the Chenab, the Ravi, the Sutlej, and the Beas, and continues upto the Makran Coast. The Punjab consists of the *doabs* of the aforesaid five rivers and two fertile wings, the Eastern, consisting of the Bist (Beas/Sutlej) doab and Sirhand, and the Western consisting of the Sind-Sagar doab, between Jhelum-Chenab-Indus and trans-Indus Derajat. Ths whole area in fact represents a vast plain containing a great mass of highly productive alluvium, as it was drained by the Indus and its five perennial tributaries.

The Trans-Indus region, lying west to the Indus, includes the valley of Peshawar, the valley of Kohat, Bannu basin, Potwar plateau and the Salt Range. It is generally cold and dry. It is also hilly in large patches. But it also nests sufficiently large tracts of fertile land which throughout the Indian history remained areas of attraction not only for the Indian population but also for the western and northern foreigners.

The region known as Indo-Gangetic Divide, located between the two great river systems of India, the Indus and the Yamuna, is bound on the north by the Siwalik hills, on the east by the Yamuna, on the south by the Thar deserts (Ghaggar river may be taken as its limit) and on the south-east by the hills of the Aravallies. The whole tract represents the alluvial land-form and is very important for the study of the early cultures. Part of the Thar desert, the Cholistan and Tharparkar desert areas of the Sind and Punjab in Pakistan form the eastern desert fringes of the area. Once, mighty rivers like Ghaggar-Hakra-Nara flowed through it with several prehistoric sites on its banks. Now they have dried up and are inhospitable. But their old soil-load is still there and it becomes very fertile when watered.

## PREVIOUS WORK

The Mesopotamian and Indus Civilizations have had their respective places in the history of the Old World archaeology for a long time now. Not so, however, the cultures that flourished on the vast land which separated these two civilizations and comprized of Iran, Afghanistan and Baluchistan, though the potential of this area was assessed more than a century ago. Moreover before 1955, field-work in these areas was exploratory with very little scientific data in hand. Still the work done by explorers like Mockler, Stein and Ross is very important for our study because but for them our knowledge would have been extremely fragmentary.

Amongst the earliest sites explored in one of the most difficult and now inhospitable

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terrains of south Baluchistan is Sutkagendor. The Dasht river valley site was brought to archaeological notice through the excavations carried out by Major Mockler in 1876 (Mockler 1877). In 1898, Dr. Noetling (Noetling 1898a, 1898b, 1899) an officer of the Geological Survey of India, first indicated the archaeological importance of Loralai and the Zhob valley sites, especially Periano Ghundai, Rana Ghundai, and Dabarkot. Then came the discovery of Nal, in 1907 by the British army people—a significant Baluchi site. It was first excavated in 1908 by the Hazara Pioneers under the command of Col. Jacob, but there is no record of the antiquities found here. In 1925-26, H. Hargreaves (1929) explored this site once again and a few adjoining sites in the Jhalawan tract of Baluchistan.

At the same time, exploration work was also undertaken in Sind. In 1925-26, Rai Bahadur K.N. Dikshit examined two sites in Sind proper—Lohumjo-daro, on the Indus; and Limo Junejo, up in the north in the upper Sind Frontier District.

These works were still primarily sporadic. Aurel Stein in Baluchistan and N.G. Majumdar in Sind were the first to put these regions on the archaeological map. In 1927, Stein (1929) undertook a detailed survey in Waziristan and northern Baluchistan and discovered a number of chalcolithic sites in the Zhob and Loralai valleys. Periano Ghundai, Moghul Ghundai, Rana Ghundai, Sur Jangal, Dabar kot are only some of the important sites he brought to light. In the continuing field season of 1927-28, Stein (1931) traversed, with great success, southern Baluchistan and the arid regions of Kharan, Sarawan, Jhalawan and Makran. He discovered more than a hundred chalcolithic sites of which Kulli, Mehi, Nundara, Shahi-Tump are out standing ones. At a number of these sites, Stein laid trial trenches for chronological and cultural purposes. Significantly, most of these sites have not been dug after him, though they were visited by Fairservis and Mughal in later times.

Between 1929 and 1931 N.G. Majumdar (1934) explored the lower Indus and the hilly tracts of Johi, Sehwan and Kohistan in Sind. He succeeded in discovering sixtytwo sites of which half were protohistoric. Majumdar's outstanding contribution was the discovery of Amri where Period I, with its distinctive pale bichrome ware, was confined to the lower strata and, therefore, clearly pre-Harappan. This pre-Harappan culture with a super-imposed transitional phase was followed by the mature Harappan complex. Majumdar's trial trenches were laid on Mound B of Amri.

In 1932, Stein (1937) turned his attention to the south-eastern tracts of Iran, which, in fact, is an extension of southern Baluchistan. Here he discovered the significant chalcolithic sites of Bampur. Khurab, Katukan, Damin, Chah Husaini, Tal-i-Pir and Tal-i-Iblis.

From 1935 to 1940, while in command of troops in the Loralai and Zhob districts of British Baluchistan (and possessing special facilities for travel,) Brigadier E.J. Ross (1946) made a fairly complete study of some of the previously explored sites in that area and also located a number of new ones. While conducting excavations at Rana Ghundai, Ross made history by unearthing pottery and artifacts which closely resembled north Iranian materials. Though Ross was a military officer and not formally trained in excavation techniques, his findings are of permanent value.

In 1938 seven years after his last exploration, Majumdar (Krishna Deva and Donald E. McCown 1949) resumed work in Sind, surveyed the area north of Johi, constituting the foot-hills of the Kirthar range and the adjoining hills and plains. More than half-a-dozen chalcolithic sites were found. Of these Rohel-jo-Kund and a few others were important in that they showed a mix of Nal and Amri cultures.

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From December 1940 to March 1941 Stein (1942, 1943) crossed the Indus river into the Bahawalpur region. He surveyed the remains of an ancient occupation along the lost Saraswati, now represented by the dry riverbed of the Ghaggar-Hakra, which emanated from the Siwaliks and crosses eastern Punjab through the tracts of Bikaner and Bahawalpur down to Sind. He located a large number of chalcolithic sites along the river bed in Bahawalpur but failed to locate any in the Bikaner territory. Today this area is thought crucial to pre-Harappan cultures which subject we will discuss a little later.

In March 1943, Stein (1943) undertook the last survey of his eventful life in Las Bela and the southern part of Gedrosia. He explored Las Bela extensively but found only one important chalcolithic site, Niai Buthi, near the town of Bela.

Between 1942 and 1945, Stuart Piggott (1950) did some exploratory work in the Quetta Valley and examined the ceramics from earlier excavations. It is on this basis that he presented a synthesis of Baluchi cultures which will be dealt with later.

In 1946, Wheeler came to India with his own techniques of excavations and uncovered (1947) an occupational deposit underneath the mud-brick defence wall at Harappa, on the western edge of the mound. This established pre-Harappan occupation of the Punjab. After the partition of the country in 1947, the first survey was conducted by B. deCardi (1964, 1965) in association with the Department of Archaeology, Government of Pakistan, in 1948. She travelled 1160 km in a field trip to Kalat State and explored 47 sites, of which 21 had not been previously known. Anjira and Siah-Damb, two very important sites of this region, were explored. Her journey extended from Quetta to Khuzdar. In the same year, she also visited Afghanistan where she followed the routes from Kabul to Kandahar and Farah.

After Sir Aurel Stein, it was Walter Fairservis who undertook a number of surveys of this region in a most systematic manner. In the summer of 1949, accompanied by Louis Dupree and Henry Hart, Fairservis (1952) made a very successful trip to Afghanistan in the course of which he surveyed the territory from Bamiyan to Kandahar, Farah, the northern Seistan plain and the Helmand valley south of Kajakai as far as Kirtaka. This was known as the first Afghan expedition. Surface findings indicated that prehistoric sites were meagre in southern Afghanistan. However, traces of painted pottery and flint working were found north of Juwain in Seistan and in the Helmand river valley near Girishk. Returning from Afghanistan, they briefly visited the Quetta-Pishin area, and a number of sites were examined.

From August 1950 to April 1951, the second Afghan expedition was launched in which surveys were undertaken in the Quetta-Pishin and Zhob-Loralai areas. Survey parties went down the Bolan Pass, beyond the'Ab-i-Gum railway station, to Nushki in the Chagai district and also to Mastung in Kalat. Five sites in the Quetta valley and one in Loralai were excavated. (Fairservis 1956, 1959). The survey in Afghanistan (Fairservis 1961) located five prehistoric sites in the Kandahar area two of which were tested by exploratory trenches. The survey in Afghan-Turkestan was, however, brief and no prehistoric site was noticed. But a two-month journey to Afghan Seistan, resulted in the discovery of a number of chalcolithic sites in the Afghan portion of the Siestan.

In the spring of 1951, another foreign mission, the French Archaeological Mission to Afghanistan, began field studies of prehistory under J.M. Casal. Mundigak was spotted during this survey and subsequently excavated (Casal 1961). For a number of years Mundigak with its long cultural sequence, was a key site in this region against which the different cultures explored were measured and positioned.

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With partition, India lost the main protohistoric sites to Pakistan. To locate protohistoric sites in Indian territory, a grand survey was launched led by A. Ghosh (1952, 1953) who identified a number of Harappan and pre-Harappan sites in the deserts of Bikaner, including the well-known site of Kalibangan. In a single stroke, twentyfive Harappan sites were identified within the Indian part of the region beginning right from the Pakistan border (eastwards), to midway between Hanumangarh and Suratgarh in the Saraswati valley, and about 22 km east of Bhadra in the Drishadvati valley. This was, therefore, the first historic survey of this region after Stein. In the early fifties Y.D. Sharma excavated Ropar, a Harappan site in the Punjab which, till recently, was considered the northernmost limit of Harappan culture.

Thus explorations and excavations continued in both countries to solve the common problems of protohistoric cultures in South Asia. During 1955-1957 F.A. Khan (1965) conducted large-scale excavations at Kot Diji, a pre-Harappan site in Sind and probed the well settled occupation phase before the advent of the Harappans. In 1958, B. deCardi excavated two sites, Anjira and Siah Damb in Kalat region (B. deCardi 1965) for pre-Harappan levels. In Sind, during 1959-1962, Casal (1964) excavated at Amri and unearthed supporting evidence which, in a way, confirmed N.G. Majumdar's and Khan's views on pre-Harappans and helped B. deCardi's efforts in the same direction.

From 1958 to 1967, the Department of Archaeology, Pakistan, led by M.R. Mughal, once again explored parts of northern Baluchistan, and some selected areas in the Greater Indus Valley—a term given by Mughal himself (Mughal 1970). The exploration offered several new interpretations of the archaeological problems of this region.

In 1960 archaeologists turned their attention to the Makran coast. An expedition from the American Museum of Natural History went to the Diwana state where, in 1955, a limited survey of the Pasni area had already been undertaken by Henry Field (1959). The results were quite encouraging and, therefore, more expeditions followed. Soon the coastal strip was thoroughly investigated by G. Dales (1962 a & b) in the fall of 1960 when the University Museum of Philadelphia, with the collaboration of the Pakistan Department of Archaeology, conducted a six-week survey of the desolate Makran coast. The purpose of the expedition was three fold: to collect all important information on the geography of the coast, to search for traces of ancient habitations and to re-examine the site of Sutkagendor. Because of its strategic importance in east-west trade, Sutkagendor was surveyed for over two weeks with exploratory trenches. The survey also led to the discovery of an ancient sea-port, known as Sotka-Koh.

Simultaneously on the Indian side of the subcontinent too, a Harappan sea-port was located at Lothal by S.R. Rao (1973). The excavations he conducted here intermittently from 1958 through 1968 yielded the remains of Harappa culture with a strong regional bias. The site has also provided valuable information regarding the trade mechanism of the Harappans.

Another important Harappan site in India is Kalibangan in Rajasthan. It was excavated by B.B. Lal and B.K. Thapar (1967) from 1961 through 1969. The discovery of pre-Harappan fortified occupation underneath the Mature Harappan township provided the much needed base to Mughal's theory of the Greater Indus.

In Pakistan, the French Mission was still active, and Casal, in 1961-62, revisited a number of sites scattered along the borders of Makran in the Bela area and also in Baluchistan in the Porali and Kud valleys. He picked up a Kulli Culture site, Nindowari-Damb, which lies on the right bank of the Kud river, a tributary of the Porali river and conducted important

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excavations there (Casal 1966).

The field year 1966-67 opened new vistas for archaeology. Four archaeological excavations unaware of each other, simultaneously worked on four crucial sites of the Iranian Plateau (south-eastern Iran) and all four have added new dimensions to the protohistoric culture of the region.

Tal-i-Iblis in Kirman, was excavated by Caldwell (1966, 1967) head of the American expedition. The evidence collected showed it to be the oldest metal-working centre in the Iranian Plateau, going back to the seventh millennium.

Tepe Yahya, also in the Kirman region, was excavated by the Peabody Museum expedition, led by C.C. Lamberg-Karlovsky (1973). Evidence collected it to be a soft-stone working centre which supplied chlorite vases, both to eastern and western markets.

Bampur, another important site in Persian Baluchistan, was excavated in the same period, by B. deCardi (1970). It fell on the trade route which connected Baluchistan with Kirman.

And finally, Shahr-i Sokhta, located in Iranian Siestan, was excavated by Tosi (in Tucci 1977). A third millennium settlement was found, showing links with south Turkmenia on the one hand ; Quetta on other ; and Bampur on the third. The discovery of a Lapis workshop is another fascinating discovery of the site.

In Afghanislan, in the winter of 1970-71, the Archaeological Mission of the American Museum of natural History led by Jim Shaffer (1978) returned to Said Qala Tepe to excavate a protohistoric village site in Afghanistan.

Adjacent to the borders of eastern Afghanistan, Dani (1971) explored the Gomal river in the 1970-71 field season. He discovered eleven new sites in the Tank Dera Ismail Khan region of which Gumla, Hathala Karam Shah, Rehman Dheri, Hisam Dherai have been significant. Limited excavations were undertaken at two of them, Gumla and Hathala. Gumla proved more important by showing a continuous sequence from the neolithic to Harappa culture.

In 1972, Mughal (1974) explored northern Baluchistan and the Upper Indus valley to record all kinds of ancient sites and monuments belonging to different periods. The aim was to re-examine archaeological evidence from these sites in the light of important discoveries made in the adjoining areas of eastern Iran, southern Afghanistan and the Greater Indus Valley and for possible cultural and chronological reconstructions. The results were extremely satisfactory.

In the fields season of 1973, Fairservis started excavations at Allahdino, a Mature Harappan site (Shaffer 1974) near Karachi. In the same year George Dales (1974, 1979) started digging at the coastal site of Balakot, which had a thick pre-Harappan deposit with pottery underlying the Harappan occupation. On the Indian side too much new work was done. In 1973 the Archaeological Survey laid three trial trenches at Manda adjacent to Akhnoor in Jammu. Its location on the right bank of the river Chenab now makes it the northern most site of the Harappa culture in the Indian territory. The site was further explored and examined by J.P. Joshi in December 1976 and a trial trench was laid at the highest available point in the mound in April 1977 (Joshi & Madhu Bala 1982).

In the meantime, in 1974, R.S. Bisht conducted excavations on a very important Harappan site, called Banawali, located on the old course of the Saraswati near Hissar in Haryana State (Bisht: 1977).

In the same year a comprehensive archaeological survey of Cholistan was initiated for a period of four years by M.R. Mughal. His discoveries, through only surface, have been epoch-making. There are as many as 73 sites in the dry bed of the Hakra-Ghaggar. Of these

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32 belonging to Hakra Ware and 41 to Early Harappan or Sothi-Kot Diji. Incidentally, Hakra is considered pre-Sothi-Kot Diji complex.

But possibly the most remarkable discovery of the year was made at Mehargarh, a large site with a long sequence of pre-Harappan cultures located at the foot of the Bolan Pass. The excavations were done under the guidance of J.F. Jarrige of the French Archaeological Mission (1979). The excavations have completely revised our views about the status of Baluchi cultures. They have made Baluchistan a nuclear area for the growth of urban cultures in the sub continent and taken it off the list of secondary refuse areas. This site has yielded the sequence of cultures right from pre-pottery neolithic to the advent of the Harappans.

Suraj Bhan of Kurukshetra University traced much to the field-work in our area of study, a large number of pre-Harappan, Harappan and late Harappan sites along the upper course of the ancient Saraswati and its tributary, the Drishadvati, now represented by the Chautang in Haryana.

The site of Dhansa near Najafgarh on the western border of Delhi and Bhudan in Punjab was excavated on a limited scale by Suraj Bhan in 1975-76. Dhansa represents a late Siswal complex, associated with a few Mature Harappan elements, transforming itself in the upper levels into Ochre coloured pottery complex. (Suraj Bhan & Shaffer, 1978).

To understand the problem of the relationship of Late Harappan Culture with Painted Grey Ware (P.G.W.) Culture, excavations at Bhagwanpura, Dadheri, Kathpolon and Nagar in Haryana and Punjab were carried out between 1975 and 1977 by J.P. Joshi (Joshi 1978). At least at Bhagwanpura the overlap between the two complexes was confirmed.

In northern Haryana, Suraj Bhan and Shaffer (1978) conducted a quick though extensive survey in May-June 1977. The area explored is bounded by the towns of Narwana, Yamuna Nagar, Jind and Panipat. Of the 91 sites recorded 50 represent new discoveries of pre-Harapppan, Harappan and Late Harappan cultures.

In Pakistan, on the other hand, 1976-1977, the excavation at Rehman Dheri, near Dera Ismail Khan was jointly undertaken by the Archaeology departments of Peshawar University and the Government of Pakistan, led by F.A. Durrani (1981). The excavation yielded for the first time, the formative stage of the pre-Harappan Kot Diji Culture, sometimes called pre-Harappan.

## TRENDS IN RESEARCH

Even a casual cataloguing of archaeological works in the Indo-Iranian borderlands shows that these regions had been researched on a fairly large scale since 1920. Archaeologists visited deserts and explored the hilly tracts and river valleys of Baluchistan, Afghanistan, Siestan and Greater Indus Valley time and again, making new discoveries. However, in time the motivation changed from adventure to the reconstruction of the past-as-it-was and the people changed from amateur travellers, explorers and army officers to trained archaeologists, though the area remained the same. Thus, what started as a leisure activity perhaps, turned into the need to know something concrete about the past—what is generally called antiquarianism of nineteenth century Europe.

The discovery of Harappa and Mohenjo-daro was momentous. It entangled archaeologists in different parts of the world into a plethora of problems which dominates present-day archaeological research : explanations of the origin and decline of Harappan culture :

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extension of the Harappan area; the relationship between Harappan and Mesopotamian civilizations, etc. These are just a few of the large number of burning problems which despite efforts to the contrary remain usettled.

The Archaeological Survey of India excavated Harappa and Mohenjo-daro for nine long years from 1922. Majumdar, during the same period, was busy exploring Sind. After his Central Asian explorations, from 1900 to 1916, Sir Aurel Stein entered the Indo-Iranian archaeology scene in the same period. He conducted a number of surveys in northern Baluchistan, Southern Baluchistan, Iran, Las Bela, Bahawalpur etc. Basically a geographer and explorer, Stein, however, started his career in India with a thorough study of *Rajatarangini*, a ninth century work from Kashmir. His surveys, therefore, were a curious mixture of geography and Indology : where the geophysical environment and the ecological features were of primary importance, and the study of historical change in time was secondary. He took, in other words, a geographical approach to a historical-archaeological problem.

However, all these excavations and surveys failed to provide new conceptual frameworks. Archaeological trenches produced only limited stratigraphies, and ceramic sequences.

Then came 1947—the year of India's partition, with which two important Harappan sites went to Pakistan. India was practically devoid of Harappan sites. That was the beginning of Harappan research in India. Large-scale, concerted efforts were made in India to locate Harappan sites. In Rajasthan, Haryana, Punjab, Gujarat and Uttar Pradesh, these excavations have had fruitful results.

After 1947 Pakistan and Afghanistan hosted several foreign archaeological missions which explored large areas of Baluchistan. Francfort's excavations at shortugai ; Casal's excavations at Mundigak and Amri ; Fairservis's work in the Quetta Valley, Sind and Siestan ; Jarrige's researches at Mehargarh ; Dale's excavations at Balakot : and the Allchins' explorations of Lewan are noteworthy. Pakistani archaeologists, too, did a lot of very important work—Dani excavated Gumla, Mughal dug at Jalilpur, Halim laid trenches at Sarai Khola, Khan probed Kot Diji and Durrani worked at Rehman Dheri. The main aim of these expeditions was to establish a prehistoric sequence in this region, to distinguish its various cultural horizons, and to gather information for comparative stratigraphies, however, limited.

Archaeologists working in this region were jolted when indications of pre-pottery culture surfaced at Kile-Gul Mohammad which led locate evidence to prove that the Baluchi cultures were largely indigenous and not imports, and, also, that Harappan cultures and its formative stage in the Baluchi cultures which was not the by product of Iranian or Mesopotamian cultural complexes. The desire to unearth a complete cultural sequence, from the Mesolithic to Harappa, kept archaeologists busy in different parts of India, Pakistan, Afghanistan and Iran. At last, in 1974, success was achieved. At Mehargarh, a complete sequence, from pre-pottery Neolithic to pre-Harappan cultures was found. However, just one site is not enough for settling such, complicated issues. Much more work is necessary and, fortunately, this is being done both in India and Pakistan.

Much had been explored and cxcavated, and also published. But the synthesis of all this material was attempted at a very late date, by Stuart Piggott in 1950 in *Pre-historic India*. He used the Iranian Cultural framework to understand Indian material. While doing so he had to adopt the stimulus diffusion' model as providing the explanatory force in understanding the cultural developments of Baluchistan as well as India. His concluding remarks clearly establishes his approach. "So far as India is concerned, therefore, we must look westwards for the introduction of arts of agriculture and it will be seen throughout this book how the

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Indian material can be properly understood only in terms of its general western Asiatic setting." (Piggott 1950 : 50). This book has served as a text for a long time, but as a completely out-dated one because we now know that these regions had *not* to look westwards for their cultural origins.

The second attempt to synthesize Indian prehistoric cultures was made by the late B. Subbarao in his *Personality of India* (1958) wherein he adopted the geographical model for understanding the cultural diversity of India from prehistoric times to this day. This was, however, in the form of a long essay, and therefore, of limited value.

The third attempt, in this direction, was made by D.H. Gordon in 1960 who followed Piggott in his observation : It must be admitted, however, that such a widespread change over a considerable area from food gathering to peasant farming and from communities in most cases with no pottery to an equally widespread use of wheel thrown pots with decoration showing a long tradition of this art behind it, must be the result of the *arrival of a considerable body of the people* who were accustomed to this more civilised mode of life (Gorden 1960 : 36). This book included many new discoveries which were not available to Piggott, but in his love for a shorter chronology of each period of Indian prehistory, Gordon has not allowed it its due.

In the year 1966, Wheeler published his *Civilization of the Indus Valley and Beyond* (1966). He wrote that the cultural development in Baluchistan, throughout the third millennium, was the direct result of diffusion from the Zagros mountains and Mesopotamia. This was practically the same stand he took in 1953 in the *Indus Civilization* and which was followed by Subbarao, Gordon and the Allchins.

In 1968, *The Birth of Indian Civilization* was jointly written by F.R. Allchin and B. Allchin, in which the authors tried to thread all available evidence with the same diffusionist views in mind : Through it (Baluchistan) *wave after wave of immigrants and merchants* have passed travelling both to and from India proper." (Allchin 1968 : 320). Still, this book is a great improvement on the previous ones in that, for the first time, due place was given to the results of scientific methods applied to Indian Archaeology. Even subjects like the settlement pattern, agriculture, metallurgy, etc., found full treatment in separate chapters in 1982 in the revised and enlarged version of this book entitled *The Rise of Civilization in India and Pakistan.*

In 1960, H.D. Sankalia wrote his *Prehistory and Protohistory of India and Pakistan* and revised it in 1974 in a new edition. His synthesis also came to the same conclusion that the Baluchi Cultures emerged from the cultural traits received in the area from the western Iranian Plateau. But his treatment was much more comprehensive, particularly in the light of his own tremendous work in western India where he located the Malwa and Jorwe cultures and connected them with the Iranian protohistoric cultures.

In 1971, in his *Roots of Ancient India*, Fairservis (1971:102-105) attributed the very *raison d' etre* of Baluchi cultural complexes to the Iranian Plateau but, undoubtedly, his conclusions were based on his own large scale field works studied in anthropological models.

In 1970, Mughal in his Ph. D. thesis entitled the *Early Harappan Period in the Greater Indus Valley and Northern Baluchistan* has offered enormous details of pre-Harappan Culture of Baluchistan and the Indus Valley. His basic approach was different, more in favour of outochthonous model than the diffusionist. However, he was also not completely free from the 'diffusionist' influence. He observes :

The Archaeological evidence indicates that northern Baluchistan enjoyed a central position

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in receiving and transmitting cultural influences from and to the regions on north-west and the Greater Indus Valley on the east (Mughal 1970 : 366).

All these syntheses are good as far as the archaeological data are concerned, but all of them supported the role of diffusion as the major causative factor in the rise of Baluchi Cultures.

Very few syntheses remain which refute this traditional model of diffusion. In 1965, George Dales was the first to provide chronological correlations within a theoretical frame work of total archaeological assemblages in Afghanistan, Baluchistan and the Indus Valley. He conspicuously avoided any emphasis on 'invasion' ideas, or Ubaid, Early Dynastic horizons emanating from the west. Dales's, emphasis, on the other hand, was on internal developments and indigenous process. He clearly observes :

To cast Afghanistan and Baluchistan in their proper role *as the homeland* for the development of the various cultural, social and economic experiments that provided the necessary antecedants for the rise of civilization in the Indus Valley (Dales 1965 : 25).

In 1978, Jim Shaffer (1978 : 168-169) brought out his Said Qala Tepe report. Here he has attempted to provide an alternative to diffusion as an interpretative framework for the birth and growth of Baluchi cultures. He has insisted on the role of nomads in the cross-current of cultures. Diffusionist explanations are, therefore, becoming increasingly difficult to maintain as new data comes from different parts of the country.

In the year 1979, Gupta while writing on Soviet Central Asia and its connection with the Indo-Iranian Borderland, placed Baluchistan in its proper prespective. In the light of new discoveries at sites like Mehargarh, he has made frontal attacks on the diffusionists. According to him, Baluchi cultures are indigenous cultures, with their own peculiar environment, and they cannot be viewed as just the off-shoots of West Asian Cultures (Gupta 1979).

Today, archaeologists are adding new dimensions to the history of Baluchistan and the plains of Indus system by unearthing more and more data to make us understand the cultutal dynamics of that region.

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# THE COLLAPSE OF THE IRANO-CENTRIC VIEW. 2

## The concept of multiple nuclear Zones West Asia, Central Asia, Baluchistan, Indus Plains

### ACERAMIC NEOLITHIC WEST ASIA

*Fig. 2.1*

IN West Asia the beginning of Aceramic Neolithic cultures has now been at placed a number of sites in the eighth-sixth millennia bracket. Many of these sites, surprisingly

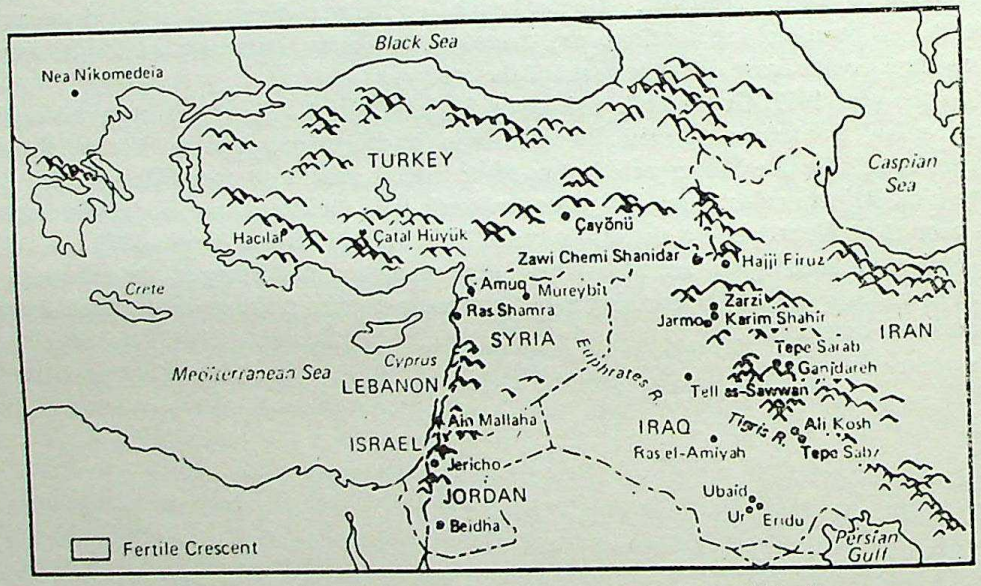


Fig. 2.1. Map of West Asia showing important Aceramic Neolithic sites

enough, present more or less similar look in broad characteristics. This makes one sometimes think whether these sites were inter-related through the process of diffusion. Baluchistan is also one of the regions which has yielded evidence of agricultural settlements without pottery. For example, at Mehargarh, on the Bolan, we have an equally ancient site of the Aceramic Neolithic. Here we have the remains of a settlement going back to the 7th millennium. Probably, the stages of change from the Mesolithic economy to the Neolithic economy occurred in South Asia more or less in the fashion of Asia Minor, Levant and West Asia. In this chapter we would like to discuss that West Asian, including Levant and Asia Minor aceramic neolithic in order to appreciate the early neolithic of South Asia—its form and status. Since

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Soviet Central Asia has so far not yielded the evidence of such an early aceramic neolithic we shall not deal with this region.

There are a number of sites—Tepe Asiab, Ganj Dareh, Godin Tepe, Tepe Abdul Hosein, Tepe Guran, Tepe Alikosh in Iran; Zawi Chemi, Shanidar, Karim Shahir, M'Lefaat, Gird Chai, and Jarmo in Iraq; Hacilar, Asikli Huyuk, Can Hasan and Cayonu, in Anatolia. Mellaart has presented a good synthesis of all these early cultures in the *Neolithic of the Near East*. On the basis of the material culture, he (Mellaart 1975 : 70-90) has offered a three phase scheme for the Aceramic Neolithic of the Zagros region.

1. The Zawi Chemi—Shanidar Phase—Pre 8000 B.C.
2. The Karim Shahir Phase—C. 8000—6500 B.C.
3. The Jarmo—Alikosh—Guran Phase—6500-5000 B.C.

**The Zawi Chemi—Shanidar Phase—Pre 8000 B.C.**

This phase is represented at Zawi Chemi and Shanidar Cave—two sites, situated in Iraqi Zagros. Zawi Chemi is an open air site measuring 215 by 275 m situated 4 km south of the Shanidar Cave, in the valley of the Upper Zab in northern most Iraq (Solecki 1964:405-12). Excavations at Shanidar Cave were carried out for four field seasons which brought out a thick cultural deposit of 14 m divisible into four layers labelled from top to bottom A, B, C, & D. Layer Bl is Proto-Neolithic and contemporary to the basal layer at Zawi Chemi and relevant here. Zawi Chemi was excavated in 1956-57 and in 1960. The cultural deposit of 1.5 m is divided into two occupational layers: top layer—A—Iron Age assemblage and bottom layer B-Early Neolithic settlement. A cemetery of 26 burials, found at Shanidar Cave, is thought to belong to Zawi Chemi people. These Zawi Chemi people may have had summer encampment at the open-air site and winter refuge in the warm cave.

The presence of a curved and crude wall made of ordinary field stones and river pebbles at Zawi Chemi indicates that by this time man had learnt to live in some sort of permanent architecture. Shanidar cave has also yielded the remains of a similar wall of compact loamy clay set in with heavy boulders (Solecki 1957:168). Some storage pits and redden earth and charcoal, indicating the presence of a hearth, have also been found at this site.

Agriculture was practised at both the sites though there is no direct evidence for plant food except hackberry. However, a number of agricultural implements and ground stone tools, including saddle querns and mullers, hand grinding stones, cylinderical pestles and chipped stone celts (Solecki 1958:105) have been reported. The use of sickle is also attested in this phase (Solecki and Rose 1963:60).

The animal bones from Shanidar cave included wild goat, wild pig, red deer, fallow deer, wolf, jackal and tawny fox, Syrian brown bear, marten gerbil and beaver (Perkins 1973:279-82). The inhabitants further collected snails, river clams, some fish and tortoise. Zawi Chemi inhabitants favoured red deer, wild sheep and wild goat. In top levels bone of sheep, bezoar and red deer account for 90 per cent of the total collection of the bones. They supplied their meat diet. Round about 8000 B.C. herding became prominent. Aq Kupruk in Afghanistan (Dupree 1964, 1972) also has yielded the evidence for domestication of sheep and goat in 8260± 235 B.C. Supporting evidence is available at Ali Kosh where in Bus Mordeh Phase domesticated sheep was existing in 7950±200 B.C. (Hole & Flannery & others 1969).

The chipped stone artefacts of this phase included a good number of backed blades,

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notched blades, scrapers, lunates, borers, burins, and sub-triangular points (Singh 1976:116). Among the flaked stone tools there are heavy duty tools, possible adzes, picks and numerous choppers. Axes and celts with polish occur only in the very top of the deposit. Bone tools are in abundance and include many awls, points with rounded ends and levelled antler flakers and a fine sickle haft. Sometimes the bone tools are carved with notched and incised designs. Ornaments have been found in the shape of tubular beads of bone, flat beads, beads of steatite, green stone and blue stone or marble and one native copper bead and bone pendants (Solecki 1969: 311-14). Mehargarh also has yielded one copper bead in its corresponding phase (Jarrige & Meadow 1980: 128).

Two radiocarbon dates are available for this phase:

1. 8920±300 B.C. for the beginning of occupation at Zawi Chemi.
2. 8650±400 B.C. for the end of layer Bl in Shanidar cave.

By and large, it seems reasonable to assume that approximately 9000 B.C. man in this part of the world started leading, at least partially, sedentary life: permanent though rudimentary structures, agriculture herding and cooking.

The distribution of this culture is quite unknown. However, Mellaart (1975:73) has visualized its possible connections with the Transcaucasian area. The evidence is, however, very fragmentary.

**The Karim Shahir Phase—Bus Mordeh Phase—8000-6500 B.C.**

This phase, though similar to earlier phase in certain aspects, is slightly advanced than the Zawi Chemi-Shanidar phase as witnessed by the presence of sickle blades with silica sheen, lightly baked two clay figurines one with red ochre deposit, marble rings and bracelets, simple bone tools and blades of bone and shell and the great dependence on chipped stone industry than on ground stone industry (Braidwood & Howe 1960).

The phase is represented at the site of Karim Shahir, M' Lefaat and Gird Chai in Iraq and at Ganj Dareh, Tepe Asiab and Alikosh in Iran.

The site of Karim Shahir is situated about 2 km east of Jarmo on the right bank of the Cham Cawra river in the valley of Chemchemal, Kirkuk Liwa. The site is approximately 160×70 m in extent. In 1951 Braidwood investigated the area of 550 sq m (Braidwood 1951 a & b; Braidwood & Braidwood 1953).

The inhabitants of Karim Shahir probably lived in encampment as no architectural remains could be traced here. Five cracked stones spread all over may perhaps represent stone floorings. The existence of clusters of hearth stones and of a pit probably used for storage have been suspected.

These people used microlithic chipped flint tools of notched blades and flakes account 70 per cent of the microliths. The other types are bladelets, end-scrapers, burins and a few dubious geometric microliths (Braidwood & Howe 1960:52-53). Heavy tools are characterized by chipped celts with polished butts, milling stone fragments and ground stone rings. Personal ornaments comprised bracelets, beads and pendants. The most noteworthy discovery of this phase includes two small and lightly baked clay figurines. These people also practised agriculture as is evidenced by the presence of sickle blades, querns, mortars, celts, etc. though no grain has been found. Animal bones included sheep or goat, aurochs, gazelle, bear, deer, fox and marten. All of them belong to the wild variety.

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No radiocarbon date is available for this phase. The phase is witnessed at the site of M' Lefaat which lies on a natural hill above the terrace overlooking the Khazir river, immediately north of the Erbil-Mosul road. The mound measures 90×120 m. Three trenches were laid out by Broman and 5 levels have been marked in 1.5 m thick cultural deposit. Significantly, traces of circular pit dwelling have been found which remind us of the pit-dwelling of Burzahom in Kashmir. The foundation of a stone wall 15 m thick was traced. Two well marked floors and concentration of stones and a hearth depression are also reported (Braidwood 1956:410-11).

The lithic industry of this site is similar to that of Karim Shahir with two variations. Polished stone tools of this site are better made. Personal ornaments are absent. Six pieces of obsidian are found *in situ* while this stone is virtually absent at Karim Shahir (Braidwood & Howe 1960:51).

Another site of this phase is known as Gird Chai, located on a gravel hill overlooking the Zab river from its left bank and about 1 km west of Girdemamik village. The mound measures 60 × 90 m. The archaeological material is similar to the material from Karim Shahir. Here again eight pieces of obsidian are reported. However, there is no trace of any architecture at the site (Braidwood & Howe 1960: 28-54).

This phase of Iraq is supplemented by the Bus Mordeh phase of Ali Kosh in Iran.

Bus Mordeh phase is fully known from the site of Ali Kosh situated in Deh Luran plain. Ali Kosh, a low mound, measures 135 m in diameter and 10 m in height. The thickness of the cultural deposit is 7 m. With three phases of occupation, two which are aceramic and are relevant here. Bus Mordeh phase is the earliest phase in this region (Hole, Flannery, et al. 1969).

The people lived in small mud-brick houses. Similar houses are found at Ganj Dareh. The size of the unfired bricks is 25 × 15 ×10 cm. Floors were made of stamped mud or clay. The mixed economy based on an intensive collections, cultivation, herding and hunting. The seeds of wild legumes and wild grasses have been located. More than 30 species of plants were known to them—trigonella, milk-vetch, medick vetch, vetchling, etc. as well as capers, goosefoot, canary grass and oat grass. At the same time they planted emmer wheat, domesticated two-row hulled barley, wild einkorn, rye grass and goat face grass were also known to them. Grains and seeds existed at this site from the very beginning. The people herded goat and sheep. They also hunted Persian gazelle onager, wild ox or aurochs and wild bear. Acquatic resources, e.g. carp, cat fish mussel and water turtle were also known to them. Flint is mainly used for tool making. Microliths included blades, drills, end scrapers and burins. Some heavy tools like pounders and small picks, were also used by them. Obsidian is very meagre, just 1 per cent of the total assemblage. Fragments of stone bowls are also reported. Personal ornaments were made of tubular stone beads and buttons of mussel shell, mother of pearl and boar tusk and cowrie shells. Cowrie shells may have come from the Persian Gulf and obsidian from Nemrut Dag (Renfrew, Dixon, Cann 1966: 30-72).

A number of crude and unbaked clay figurines of goats have been found but no human figurine has been recovered so far. No evidence is available for the disposal of the dead either.

Mellaart (1975:74-75) feels that this phase at Ali Kosh witnessed seasonal occupation as there is no evidence for the summer products in the settlement. Hole (1968:260-61) thinks that the social organization of Bus Mordeh people was based on patrilineal and the diversified economy. It may suggest some kind of division of labour between two sex. Three

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radiocarbon dates are available for this phase: 5430 B.C., 5720 B.C. and 7950 B.C. All of them came from the 'kitchen midden' area and hence are less reliable.

The sites of Ganj Dareh, Tepe Asiab and Tepe Abdulhosein also belonged to the same phase. The first two sites are situated in Kermanshah area and the last one in Luristan.

The site of Tepe Asiab lies at a distance of 6 km east of Kermanshah overlooking the Kara-Su river. It furnishes evidence of semi-permanent settlement of food collectors. Limited excavations have brought to light a roughly round and shallow basin with a diameter of 10 m approximately. It has been considered as a semi-subterranean domestic structure. However, no post-holes or any other evidence for roofing has been located (Braidwood 1960:695-969.)

The lithic industry of this site comprised small blades, blade cores, microliths, numerous irregular flake tools, coarse scraping tools, coarse ground stone objects and fragments of stone bowls were also picked up. The smaller objects comprised beads, pendants and bracelets of marble. A few clay figurines with a special mention of a human figurine with plaque like face are also reported. Two human burials with traces of red ochre have also been found. Clam shells were also used by them. The people used meat for their diet, especially of wild animals.

Braidwood allots a date between 10,000 and 7,000 B.C. for this Asiab settlement on the basis of its typological similarities with Karim Shahir. No radiocarbon date is available for this phase.

**Ganj Dareh Tepe**

Ganj Dareh Tepe is situated in the Games ab Valley near the town of Hasrin. The mound of 8 m deposit with five occupational levels, measures about 40 m at its maximum width. It was excavated by Philip L Smith (1967:139; 1968: 158-60). Initially the settlement was considered as aceramic neolithic with solid architecture going back to the ninth millennium B.C. (Young & Smith 1966:388-89), however, pottery was reported from subsequent field seasons in upper four levels, the Basal level (Ganj Dareh E) is still devoid of pottery. People probably lived in temporary huts and encampments as evidenced by shallow pits and hallows of circular plan containing ashes and burnt stones, which may have been used as fire pits. Next four levels are represented by solid mud brick rectilinear architecture but as they belong to the ceramic phase, they are not relevant here. A few clay animal figures and flint tools of blade-flake tradition are reported from the basal level. A number of animal bones found in this level are yet to be studied.

A radiocarbon date for this level is 8450 ± 150 B.C.

**Jarmo Ali Kosh—Guran Phase**

The third phase in the series of Aceramic Neolithic starting about 6500 B.C. and is witnessed at Jarmo in Iraqi Kurdistan, Ali Kosh in Khuzistan and Tepe Guran in Luristan. Braidwood (1953:288) has called his phase as an 'Era of primary village Farming Efficiency'.

Jarmo is situated on a hill top overlooking the Wadi of Cham Cawra, 12 km east of Chemchemal. The site measuring 90 × 140 m was excavated by Robert J. Braidwood in 1948, 1950-51 and 1954-55 (Braidwood 1951 a, 1956:410-11; Braidwood & Braidwood 1950: 189-95; 1951:992-5). The site has yielded a cultural deposit of 7 m divisible in 15 building levels. The top five level (1-5) have pottery and the lower eleven are devoid of it. Excavations in the aceramic levels, have brought to light houses, built of pise' and containing several rooms with mud floors laid on reed. The room sizes vary in each house. Bigger rooms might have been

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used for living purpose and smaller rooms for storage. One of the rooms has yielded an oven complete with chimney. In upper levels, these tauf walls have stone foundations.

The dead at Jarmo was possibly buried outside the settlement as the site has not yet yielded any ritual burial.

Ground stone industry here included celts, querns and rubbing stones, mortars and pestles. Large pierced balls, loom weights or mace heads are comparatively rare. The chipped stone industry is characterized by blades for composite tools, such as the wood sickles with blades, bladelets, side-blow flakes and scrapers. Bone tools comprised awls, pins, needles and spoons. Rings and cylindrical beads made of bone are also reported. Geometrics such as triangles and crescents are frequently made of obsidian. The most noteworthy discovery of this period is the finding of more than 1000 fragments of stone (marble) bowls, inverted truncated conical form with flared lips, spherical or illipsoid forms and low carinated bowls. Personal ornaments were made of stone, bone and clay in the form of beads, pendants and bracelets. Animal and human figures are also recorded.

Agriculture was practised as evidenced by the presence of sickles, polished stone celts, querns, pestles and mortars, and above all by the presence of cereals. Domestic emmer wheat and two row hulled barley were grown and einkorn was also present. Field pea, lentils and blue Vetching were also known to them. Domestic goat, and to a lesser extent sheep, were herded; the dog was domesticated but aurochs, boar, fox, deer and gazelle were hunted (Reed 1969:371).

These evidences show that Jarmo was a permanent village where people practised mixed economy based on hunting, food collecting and limited domestication of animals and plants.

The chronology of Jarmo is highly controversial. There are 12 radiocarbon dates from the site which fall within the time-span of 9300±300 B.C. to 3310±450 B.C. Braidwood assigns a date of 6750 B.C. for Jarmo's aceramic phase.

**Ali Kosh**

Ali Kosh phase emerged out of the Bus Mordeh phase of the Deh Luran plain. Transition from semi-permanent to permanent village is clearly evidenced at Ali Kosh (Hole, F. & Flannery 1962:97-148; Hole, et al 1969). During this phase, people started living in multi-roomed houses, generally made of sun dried bricks (size: 40×25×10 cm); walls were plastered with clay both from inside and outside and the house floors were made of stamped mud, levelled with a layer of clean clay and topped with woven mats of reed. The size of rooms increased to 3×3 m and the walls upto a metre thick. Cooking was done in court yards.

There was an increase in the domestication of plants, like emmer wheat and two row hulled barley. Wild legumes were decreasing. The crops were still harvested with flint sickles. Pestles and mortars were added to it.

The domesticated sheep increased in this phase, but the goat still outnumbered them. Hunting of gazelles, onager and wild cattle increased. Flint choppers were used for cutting the flesh of animals.

Tool assemblage of Ali Koshian included flint blades, retouched into diagonal-ended and backed blades. Drills, reaers and burins also formed part of their tool-kit. Obsidian was in limited use (2%). Bone tools were mainly awls and needles. Stone bowls were in use but use of 'wicker' baskets as containers, water proofed with asphalt was more common. Terracotta human figurines were found in fragments. The tradition of making animal figurines continued. Personal ornaments included beads of white stone discs, sea-shells and mussel-shell pendants.

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Significantly, a tubular bead of native copper has been found.

Evidence for two different types of burial system is available: one type showing the dead buried with their ornaments in slightly flexed position under the house-floors; the second showing limbs of three adults buried after the decomposition of the flesh. Inhabited area covered almost a hectre during this phase.

Ali Kosh assemblage is similar to Jarmo pre-pottery levels and Guran pre-pottery levels. Of nine radiocarbon dates available for this phase, seven fall in the time bracket of 5790 to 6475 B.C. while one sample from each gives a date of 6900 B.C. and 8000 B.C., respectively. The excavator has suggested 6750-6000 B.C. for Ali Kosh phase.

Pottery appeared in the succeeding phase. known as Mohammad Jaffar Phase whose remains have been found at Ali Kosh. It is dated to 6000-5600 B.C.

Pish-i-Kuh region of Central Luristan, explored by Goff (1970:199-200; 1971:131-152), has also yielded a long sequence of occupation. At Tepe Abdul Hosein, located in the plain of Khawa, there is the aceramic level. The mound measures over 40 m in diameter and 6 m in height. Pottery was found in the upper levels only. Aceramic level revealed flint industry comprising of backed blades, obliquely truncated blades, notched blades and finelly prepared pencil-shaped blade cones. No geometric microlith or obsidian is reported. Traces of mud-brick walls are also recorded.

**Tepe Guran**

Tepe Guran has also revealed the evidence of transition from Aceramic to Ceramic neolithic. It is located on the right bank of Jazman Rud in the western part of the fertile Hulailan Valley. The mound measured approximately 100×80 m and the deposit is of 8 m. It was excavated by Mortensen (Meldgaard, Mortensen and Thrane 1964:97-113). It has been divided into A to V layers, starting from the top. Of these, D to V are neolithic.

The first inhabitants of this site were primarily herders who lived in wooden huts with rectilinear or slightly curved walls (Mortensen 1964:28-36). Level P yielded for the first time the remains of well-built mud walled houses on stone foundation together with wooden huts of the earlier type. These were, however, commonly encountered from level M upwards. The walls were of oval, unbaked mud-bricks and faced with straw-tempered mud-plaster. A house generally contained a number of small rooms and walls had recesses for low mud-benches or tables in the upper level of the neolithic settlement. Walls as well as floors were coated with red or white gypsum. Level S for the first time yielded pottery fragments, which were found more and more in later levels

The lithic industry of Guran comprises flake blades made of flint and obsidian. They included conical micro-blades, sickle blades, borers, notched blades, and a few microliths such as trapezes. Ground stone industry consisted of pestles, mortars, rubbing stones. It is significant to note that querns, rubber and sickle blades were absent in earlier levels because that indicates that agriculture was not known to the settlers in the initial stages. Farming developed only at a later stage.

Marble was used for vessel making. Bone tools included awls, needles and spatulae. Other small objects are buttons, beads, pendants and figurines of women and animals made of stone, bone and shell.

House floors have yielded a few single burials in contracted position but the grave goods are rare.

Two radiocarbon dates are available: for the Aceramic phase (level U) 6460 B.C. ±200;

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for the Ceramic phase (level H) 5810 B.C. ±150. A time bracket of 6500-5500 B.C. is suggested for the total assemblage of Guran neolithic.

**Tepe Sarab**

This phase in Kerman Shah area is represented at the small site of Tepe Sarab, located about 17 km east-north-east of Kerman Shah. It was a permanent settlement and the inhabitants lived in pit like depressions, similar to those found at Tepe Asiab. No mud-wall architecture is reported. There is evidence of domestication of goat and sheep as well as of emmer and two-row barley along with wild barley (Braidwood et al 1961:2008-2010).

The survey of Aceramic Neolithic settlements in the Zagros region has, however, not yielded a single settlement which could definitely be considered as the original home of the Baluchi aceramic neolithic settlers although a number of features, e.g. the lithic industry and bone industry, are common to both the regions. The dissimilarities are many and prominent. They show differences in the mode of life.

First, in architecture. Mehargarh has yielded mud brick houses with inter-connected rooms and open spaces left between two houses, a feature which has not been noticed on contemporary West Asian sites although mud brick houses have been found on several sites.

Secondly, the evidence of change from the wild stage to domestication of animals is recorded at Mehargarh itself. For example, in the assemblage from early levels, the remains of gazelles, wild sheep, wild goats, swamp deer, large antelopes and wild cattle are predominant but in later levels slowly and gradually the domesticated cattle, goats and sheep outnumbered all the other animals. At Mehargarh the most important domesticated animal was cattle and not the sheep or goat like West Asia. Water buffalo does not exist anywhere in Western Asia. We shall deal with it in greater details later; here we want to emphasize only one point: there are striking differences in the whole pattern of domestication of animals between West Asia and South Asia.

Thirdly, Baluchi neolithic folk used a number of domesticated cereals: two row hulled barley, six row barley, einkorn wheat, emmer and bread wheat, as well as plum like jujube fruit and dates. Six row barley and bread wheat have rarely come from West Asian sites of this period.

Fourthly, the system of disposal of the dead was different from that in West Asia. Whereas in West Asia either the house floors or the outskrits of settlements were used for burials, in Baluchistan it is the open space between two houses which was used for the disposal of the dead. Further, in West Asia, the grave-goods are rare while graves in Mehargarh have yielded a great wealth.

Fifthly, in West Asia at least 90 per cent of the neolithic sites have used obsidian tools though it was not locally available. At Mehargarh there is not a single chip of this stone. Lapis and turquoise for making ornaments were used at Mehargarh but absent in Zagros sites even when turquoise was locally available.

Several other such variations may be listed but on the basis of the facts alone it can be said that Mehargarh represents the autochthunous development of neolithic culture in this region.

## ANATOLIA

The second area for Aceramic Neolithic lies in Anatolia, modern Turkey. The Upper

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Palaeolithic of Anatolia especially on the plateau is not fully known although there are rich sites in the Antalya region and in the Amanus mountains. Epipalaeolithic cultures, characterized by Microlithic Industry which developed locally in the Antalya region, may be divided into two cultural phases:

1. The Belbasi Culture
2. The Beldibi Culture

The pre-Bronze Age settlements are confined to the southern half of the Anatolia, the Taurus Zone, with a few minor exceptions. No neolithic site is known north of the Halys (Kizil Irmak) or in the Ankara-Eskishir basin but around the eastern shores of the sea of Marmara and in the Akhisar-Izmir area there are sporadic finds of the neolithic cultures. The neolithic culture of Anatolia (Mellaart 1972:279-84) has presented two distinct phases:

1. Aceramic Phase (before 6500 B.C.), Asikli Huyuk, Can Hasan, Suberde, Hacilar and Cayonu.
2. Ceramic Phase (C. 6500-5500 B.C.) Catal Huyuk east, Can Hasan 4-7, Reis Tumegi Ilicapinar, Mersin, Tarsus, etc.

The Ceramic Neolithic phase is succeeded by Chalcolithic cultures, often with red-on-cream painted pottery.

Here we are concerned with the Aceramic phase of the neolithic culture only.

**Asikli Huyuk**

The mound of Asikli Huyuk is situated in the vilayet of Nigde about 25 km south west of Aksaray on the right bank of the river Melendiz Cay. Todd (1966; 1968) explored the mound in 1964. Traces of mud-brick walls have been noticed in the exposed section. Obsidian was used for tool-making throughout as is evidenced by the recovery of 6200 pieces of this stone.

Chipped stone industry included parallel-sided blades and scrapers in large numbers and borers, burins, sickle blades and cores in varying quantities. The ground stone industry comprised two polished axes, one celt, one rubber stone, a small pounder and a fragment of a heavy pestle. Bone tools are characterized by three awls and a belt hook.

The only vegetal matter collected from the site has been identified by Helbaek as hackberry. Animal bones belong to sheep or goat, cattle, onager, red deer and hare.

Five radiocarbon dates place the occupation of this mound between 7008 and 6661 B.C.

**Hacilar**

The site is most important as it has yielded the earliest evidence for aceramic farming occupation. It is situated in south-west Turkey, 25 km west of the town Burdur. The mound, measuring 135 m in diameter and 5 m in height, was excavated by James Mellaart (1970) from 1957 to 1960. The cultural sequence at this site is as follows (Mellaart 1970: 92):

Hacilar ID Squatters level
IC
IB Repairs followed by Destructions

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IA Fortress

— — — — — — — — — — — — — —

II b Last Phase of the fortified enclosure
II a First phase of the fortified enclosure
III
IV
V

— — — — — — — — — — — — — —

VI Final Late Neolithic settlement
VII
VIII
IX First Late Neolithic occupation

— — — — — — — — — — — — — —

Lacuna in occupation

— — — — — — — — — — — — — —

Aceramic Hacilar
I-VII

— — — — — — — — — — — — — —

The Aceramic level has seven building levels. The Aceramic Hacilar was a small village of permanent houses, although no house plans and no door-plans could be located. The houses comprised of small rooms, rectangular in plan. Walls were made of large mud-bricks of the size $72 \times 28 \times 8$ cm on an average. Most of the walls were one brick-thick but the courtyard walls were built over a metre thickness with stone foundations. Courtyard has yielded the hearths, ovens, square bins and post-holes. The small rooms had mud-plaster on walls and floors, the larger rooms had red burnished lime plaster floors laid on a pebble-bedding. The floors were occasionally decorated with red ochre.

The people practised simple dry farming. Two row hulled barley, emmer wheat and lentiles were cultivated. Wild einkorn and naked six row barley also existed (Helbaek in Mellaart 1970:239). In Aceramic V phase two bins, though empty have been found. However, a big patch of white ash revealed the silica skeleton of numerous food plants and weeds.

Animal bones included sheep or goat, cattle and red deer. However, they are too few to indicate their real species: domesticated or wild. The dog of domesticated variety was, of course, present there.

Apart from this, there are not many finds to report. Stone artefacts included a fully polished, green stone axe-head, a few stone beads, a few stone awls, fragments of marble bowls and some flints. The chipped stone industry comprised 11 pieces only—blades and blade cores. Four of them are of obsidian. There are no burials but several skulls have been found set on the house floors.

No clay figurines has been reported.

Only one radiocarbon date is available $6740 \pm 180$ B.C.

**Suberde**

Another site of this region is Suberde which lies on the north western shores of the Sugla lake, 11 km south-east of Seydisehir at an elevation of approximately 1100 m in the Taurus mountains. It measures $70 \times 70$ m. This was explored by Ralph Solecki (1964) in 1963 and was investigated by Jacques Bordaz in 1964 and 1965 (Bordaz 1965 & 1969). Three layers—

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surface layer, middle layer and lower layers—have been marked here. Middle and lower layers belong to the Neolithic phase while the surface layer belongs to the Byzantine and Islamic periods.

No Permanent structure existed in the lower levels. The presence of hearths with ash and charcoal attest the habitation during this period. However, the upper-most part of this layer yielded the remains of structures with unplastered wall, floors and benches. A number of clay lined circular bins or basins have been found. In middle layer more structures have been noticed. They are made of mud with walls on stone foundation.

The took-kit of these people included chipped stone tools, heavy stone artefacts, bone tools, etc. The chipped stone industry is characterized by projectible points, piercing tools, blades retouched into drills or perforators, backed blades and microliths—triangles, lunates and scrapers, side scrapers, flakes and blades. Significantly, 90 per cent of these tools are made of obsidian and 10 per cent of the flint. As many as 320 sickle blades of flint with sheen on their edges are reported from both the layers. This might show some sort of farming.

Heavy stone artefacts included celts, chisels, rectangular shaft-straightners and number of river pebbles. The bone industry is represented by a number of awls and needles. Clay objects are present in sizable numbers: 13 sherd-whorls, 17 spindle whorls, 33 small cones of low-fired clay and 21 low fired figurines.

The site has yielded a large number of skeletal remains of animals (Perkins and Daly 1968: 96-106) which include wild varieties of sheep, cattle, goats, pigs, hare, red deer, fallow deer, jackel, fox, bear and marten. Aquatic resources are seen—clam shells and fish bones. Bones of birds and land tortoise are also there. The only domestic animal was the dog. No recognizable seeds could be obtained. Mellaart (1975:96) feels that Suberde may have served as a seasonal hunting camp for the Catal Huyuk settlement.

Some crude pottery has been noticed in the lower levels but it was neither commonly used nor it continued in upper levels.

Several radiocarbon dates place this site in second half of the seventh millennium B.C.

**Can Hasan**

Can Hasan III is an aceramic site situated south-east of Catal Huyuk. The mound measures 100 m in diameter and 6.75 m in height with seven building levels. The excavations (French, *et al* 1972:180,190) have revealed a complex of rooms, courts and passages built of mud bricks or pise'. Walls and Floors are applied with mud plaster; sometimes even painted over with red ochre. Buildings are rectangular in plan and mostly devoid of doorways which probably suggest that the entry was from the top. The same feature has been noticed at Aceramic Hacilar and Catal Huyuk both. Ovens are found built into the walls.

The other antiquilies include finely retouched obsidian, end-and flake scrapers, awls, heavy and small backed blades. Flint sickle blades also occur. The bone industry is characterized by awls, scoops, spatulae, pins, pierced spatulae and tubular beads.

Amongst the animals, the cattle was the most important meat animal, followed by sheep and goat (Payne 1972:191-194). The people were familiar with the equid, probably onager, pig, red deer and hare. Domestication of these animals is not yet ascertained.

Can Hasan III had adopted an agricultural economy as evident by the identification of bread wheat, club wheat, emmer, einkorn, walnut, hackberry, wild grape, prunus and crataegus.

No radiocarbon date is available for Can Hasan III. On the basis of typological

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comparisons with Suberde, D.H. French, the excavator, has assigned it a date of 6500 B.C.

**Cayonu Tepesi**

The low level mound of Cayonu Tepesi is located 5 km south west of the town of Ergani, near a tributary of the upper Tigris. The mound measures 250×150 m. It has yielded an aceramic neolithic settlement, divisible in five phases. The site is very important as it has revealed the evidence for the transition from the wild varieties, of plants and animals to the domesticated varieties, developed architecture and above all the use of copper (Braidwood *et al* 1969:1275-76; Cambel & Braidwood 1970:51-56; Braidwood *et al* 1971).

All the phases witness the development in architecture. Lower phase (Phase I) has yielded fragmentary walls and pit ovens; Phase II has revealed two grill-like structures; Phase III has given a terrazzo floor, made of white limestone cobbles and pebbles. Phase IV is represented by the mud-brick structures with stone foundation and Phase V witnessed a number of complete and some fragmentary structures.

Flint and obsidian were used for making the chipped tools and blades. Some 10 per cent blades have shown the sickle sheen. Ground stones artefacts included celts, querns, hand stones and hammer stones. Stone beads, pendants and bracelets were worn by the neolithic folk. Terracotta figurines included a crude clay figure of a pregnant women.

The outstanding discovery was the use of copper for making tools and ornaments. The copper objects included drilled beads of malachite, part of tools, two tiny pin-fragments and a complete pin.

As noted earlier, the site witnessed the transitional phase, from the wild to the domesticated species of animals and plants. The lower levels have yielded bones of wild variety of animals and remains of plants while the upper levels yield their domesticated varieties. In phases I and II, the wild variety of animals consisted of Bos Primigenius, Sus, Cervus Dama Ovis, and Capra Sp. Dog was of the domesticated variety. Phases IV—V have yielded bones of the domesticated sheep, goat and pig. Similarly, wild forms of emmer, einkorn and vetch have been reported from the lower levels which the cultivated emmer, peas, lentils and vetch appear in the upper levels. This development has played an important role in the evolution of culture.

There are the two radiocarbon dates for phases IV and V: 6840±250 B.C. and 6620±250 B.C. The lower phases may thus be placed in the second half of the eighth millennium B.C.

## LEVANT

Levant is one of the important regions of the Near East where the traces of the earliest neolithic cultures have also been noticed, for example, at Jericho. The sequence applied for the whole of Levant (Singh 1976:18) is as follows:

1. Mesolithic (Natufian culture) lower most-found at a Al Khiam, Einan, Abu Gosh, Jericho and Baidha.
2. Proto-Neolithic (short lived phase)—found at Jericho and Nahal Oren.
3. Pre-Pottery Neolithic (divisible into two sub-phases A & B)—identified at Jericho, Beidha, Ramad, Bouqras, Munhata and Mureybit.
4. Pottery Neolithic (divisible into two sub-phases: A & B) traced at Jericho, Ramad, Munhata, Ghrubba, Byblos, Ras Sharma, etc.

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**Jericho**

Jericho, situated on the outer skirt of the modern oasis, gives us a fair idea about the aceramic settlements and the transition from Mesolithic to the Aceramic Neolithic in the region. The site of Jericho was explored by Warren (Palestine Exploration Fund) in 1868 and was excavated by Sellin and Watzinger in 1907-09 (Garstang 1932); by Garstang in 1930-36 and by Kathleen Kenyon in 1952-58 (Kenyon 1953; 1956 a & b; 1959; 1970) have brought to light the occupational deposits of various phases, from the Mesolithic to the Iron Age, with occasional breaks in the sequence.

The modern oasis of Jericho is full of luxuriant vegetation, nourished by perennial spring. Probably in the remote past also the same type of growth attracted the people from time to time.

The first occupants of Jericho belonged to the Mesolithic Age and were hunters and food-gatherers. They used blades, lunates, borers, sickles, blades, etc. Bone objects also occurred. A clay platform bounded by a substantial stone wall is also reported. Kenyon (1969:151) assigned a date of 9000 B.C. to this phase.

Proto-Neolithic folk followed these Mesolithic people. For the first time, settled way of life emerged in this area. Bases of hut-like structures and a number of floors have been traced. The tool-kit of these people included arrow-heads, sickle blades, burins, core scrapers, chisels and adzes, small axes and numerous fine points or blades and flakes, made of flint. The occurrence of obsidian suggests movement of people in the area.

The Proto-Neolithic phase was succeeded by the Pre-pottery Neolithic A (PPNA) period. This aceramic period is characterized by mud-brick architecture, flint and obsidian industry, bone tools, etc. Mud brick houses with two rooms at least, round or rectlinear in plan, were built with the walls made of plano-convex bricks, usually with hog-backed profile. Floors were made of beaten mud. The outstanding feature of this period is the emergence of a defensive settlement wall along with a massive tower and a rock-cut ditch (Kenyon 1956 c). It may indicate the status of the site as a town as well as the existence of central authority.

Agriculture was practised. Emmer was grown. In fact, even the existence of an irrigation system has been suspected but it is yet to be proven (Kenyon 1959 b:40).

The lithic industry reflects the Natufian characters, and includes arrow heads sickle blades, numerous burins and borers, small chisels, adzes and picks. Bone industry was flourishing on a large scale. Obsidian was extensively used. The dead were buried into regular graves in contracted position. The approximate period for this phase falls between 7825 and 6770 B.C. on the basis of the radiocarbon dates.

There is a break between PPNA and PPNB phases. PPNB phase brought a change in architecture, artefacts and burial practices. The remains of large well proportioned, interconnected rooms, for living and storage both, have been noticed. Walls were made of flattened cigar shaped bricks with the herring bone pattern. Floor was covered with gypsum plaster and rush mats. Houses were found with courtyards containing hearths. The remains of a public building have also been noted.

The flint industry has been technically improved and consisted of well made thin and narrow blades, numerous arrowheads, sickle blades, burins, long trihedral roads, blades and a few borers. Scrapers are very rare and axes, adzes, etc. are virtually absent. Obsidian is used rarely and bone industry suffered a set back. Other objects, worth noticing, are the dishes and bowls of fine limestone, querns, hammerstones, pestles, grinding stone, etc.

Dead bodies were simply buried in rubble and debris of their own houses. Grave goods

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are rare.

A unique feature of this phase is the discovery of ten plastered human skulls (Kenyon 1953 b : 603). Nine of them have been found buried in a discarded heap of a house and the tenth one is from far off area. Probably in some burials the skulls have been removed after the decomposition of the body and restored in the plaster with shell eyes. It is difficult to guess the concept underlying this practice, however, one can relate it to some sort of religious belief.

As far as the economy of Pre-Pottery Neolithic is concerned, it is believed that it was a sort of mixed economy in which hunting played a major role. Except for the dog, none of the animals is of domesticated variety. PPNA phase has yielded the bones of wild pig and gazelle. PPNB phase revealed the bones of goat, probably of domesticated variety, cats, wolves, jackels and foxes. Goat and sheep dominated though cattle was also present.

Information regarding the plant remains have been gathered from the samples of carbonized cereal grains, legumes and fruits and their impressions in mud bricks. Two row barley was known to them. Emmer was traced in PPNA phase while einkorn was found regularly in abundance from phase B.

After PPNB period, the Ceramic Neolithic period started with a break in between. However, the evolution of Ceramic Neolithic out of pre-pottery Neolithic could be clearly discerned.

This rather too, quick a survey of early neolithic cultures of West Asia and the Near East clearly shows that the beginning of civilization did not take place only at one place from where it diffused to various regions. The Old World has seen in several areas the transition from the Mesolithic to the Neolithic, from hunter to food producer, from hut to house, independent of each other. This phenomenon took place at least on 25 to 30 sites in about half a dozen ecological zones from Levant to Baluchistan. Every zone is characterized by its own geomorphological and climatic peculiarities. Human response to them was, therefore, also varied although the directional changes were more or less the same—from pre-pottery hut dwelling to ceramics and mud houses. In the Mesolithic period the lithic tool technology and tool types were shared by people over a very large area. As a result microliths have appeared almost in all the aceramic neolithic settlements. With the beginning of settled life, not only the use of sickle-blades increased but wild varieties of cereals and animals also gave place to the domestic varieties. However, the pattern of these changes differs from region to region.

Thus these traits can hardly be understood in terms of diffusion. There is not a single site from Levant to Zagros which could provide even fifty per cent parallels from the Baluchi Aceramic Neolithic assemblage.

The general similarity amongst the tool-kits of various settlements should not be over-emphasized as these similarities are normally marked by the Mesolithic elements of the previous ages. It was only a matter of legacy. What matters is the emergence of new elements. Thus there is nothing surprising that at Jericho the Natufian character of the stone tools continued for a long time and at Mehargarh also the stone tools continued till Mehargarh VII. What is important to note is the character of the dwellings and the type of selection of the wild cereals and animals for domestication. Baluchi folk knew a vast variety of plants which were not known to the West Asian neolithic folks. Six row barley of domesticated variety was not commonly known to the West Asians, although it was perhaps grown at Hacilar in Anatolia. But Hacilar is too far off a place for direct active diffusion of traits to Mehargarh.

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The pattern of animal domestication is clearly different from West Asia. In Western Asia goat and sheep predominated while in Baluchistan it was the cattle. Water buffalo of Baluchistan did not occur in West Asia at all. Lapis lazuli and turquoise were extensively used by Mehargarhians while they are practically unknown in West Asia. On the other hand obsidian found at many West Asian sites has not been found in the Baluchi assemblage. Burial system practised by the neolithic folks in Baluchistan has definite regional variation. The dead were buried in both the flexed and extended manner in earlier levels and in later periods only post exposure selected bones were buried. These graves were neither under the house-floors, the system commonly known in West Asia, nor outside the settlement. These were made in open spaces between the two structures. Similarly, hardly the West Asian neolithic graves have yielded grave goods in such a vast variety as Baluchi graves have done.

The original home of several stray findings of Mehargarh I have been traced out of the Kachhi plains, e.g. trapeze are connected with horned trapeze of Keltminar culture of Soviet Central Asia and water buffalo exists in eastern China. However, it is difficult to say anything in terms of diffusion contacts on such single examples.

Jarrige (1979 : 476) has compared the Mehargarh assemblage with the material culture of Tappeh Sang-e-Cakhmaq in northern Iran. However, while tracing the parallels he has quoted the-mud-brick houses with rectangular rooms and elaborate fire places and ovens. These parallels in architecture, to our mind, are not enough to trace the origin of Baluchi Aceramic Neolithic in Iran since these items belong to the basic needs of man. Items of movable property should have been considered first before these parallels can hope to provide additional support. But there the parallels hardly exist. Thus, in our most considered opinion, Baluchistan had also passed, independent of West Asia, through the stage in which man changed his life style from hunting to food producing, as it happened elsewhere in West Asia and Asia Minor.

It may be interesting to recall that like Baluchistan, Anatolia till 1955, was also considered as a secondary zone of neolithic and only the discovery of Hacilar Aceramic brought Anatolia under the primary zone of neolithic on the map of the Old World. With the discovery of Mehargarh Aceramic, Baluchistan also becomes a nuclear zone of early neolithic cultures.

## SOVIET CENTRAL ASIA

In the last two decades, Soviet Central Asia has proved its archaeological potentials. A number of sensational discoveries have opened a new vista in the protohistoric archaeology of South Asia. Recent archaeological writings dealing with the early Chalcolithic and Bronze Age cultures of Indo-Pakistan subcontinent, often refer to the related Soviet Central Asian cultures. In this chapter we shall, therefore, deal with them.

Soviet Central Asia is divided into four republics—from east to west, they are Kirgizia, Tadjikistan, Uzbekistan and Turkmenistan. However, parts of Kazakhstan, a vast region around and beyond the Aral sea, are also included in Central Asia.

Soviet Central Asia has two major physiographic divisions: one, in the north, is marked by clay or salt marsh-plains and also by dry sandy or gravelly steppes; the other is characterized by an extensive mountain system on the south and south-east. The highlands of the Tien-Shan and Pamir-Alai are on the north and the east. Protohistoric cultures developing slowly and gradually into urban complexes have been traced primarily in the piedmont regions of the Kopet Dag.

On the south this mountainous country is bound by the Amu Darya (the Oxus River), and

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on the west rises the Kopet Dag Chain of mountains with the Elburz range in the west and with the Parapamir in the east. The south-eastern highlands of this are called Khorasaan.

Besides these mountains, the land is covered by two vast deserts: the Kara Kum and the Kyzyl Kum.

Soviet Central Asia, particularly the eastern part, is however also a land of rivers, the Amu, the Syr, Zaravashan, the Murghab. However, unfortunately, they have mostly been of very little use to man since they flow in dry, hot country. The deltas of these rivers, however, did provide some oasis for the development of early cultures. Though the latter terminated well below the urban level.

On the basis of recent archaeological discoveries a long chronological sequence has been established for this area, from the Neolithic to the late Bronze Age. Djeitun is the type site for the Neolithic; Chakmakli-Depe and Mondjukli Depe for Pre-Anau culture; Anau for Anau I A culture; and Namazga for Chalcolithic and Bronze Age cultures. A brief outline of these

*Fig. 2.2*

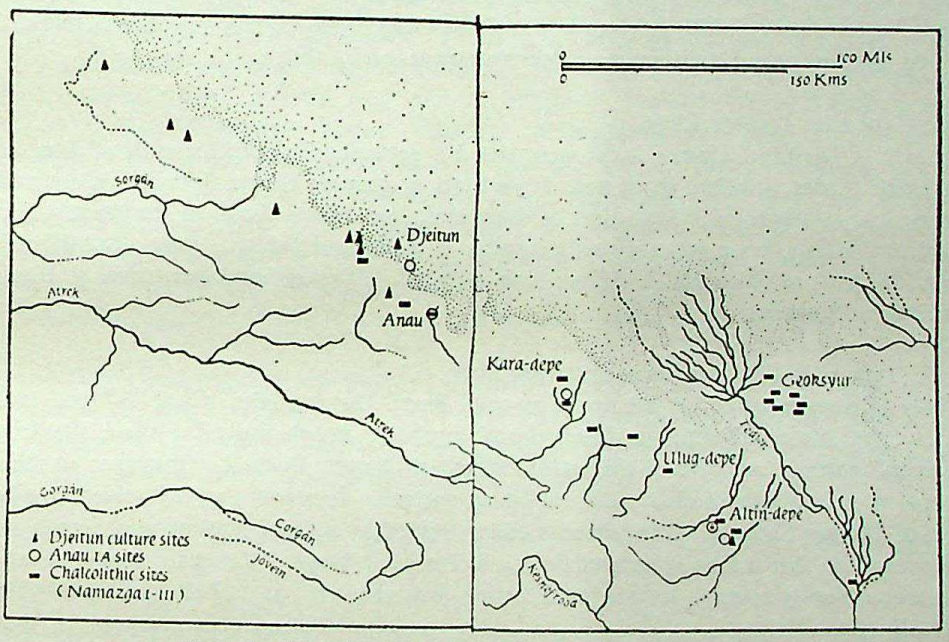


Fig. 2.2. Map showing protohistoric sites in South Turkmenia.

cultures is essential in understanding the cultural dynamics of Baluchistan, where these traits are clearly demonstrated. Earlier these traits were thought Mesopotamian and Iranian in origin, but now are clearly shown to be south Turkmenian. Below we give the cultural and chronological sequence of these cultures.

## NEOLITHIC CULTURES

### Djeitun Culture

As elsewhere, in south Turkmenia, too the Mesolithic developed into the Neolithic. The most developed stage of the Neolithic is Djeitun Culture with Djeitun Depe as the type site.

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It is located about 36 km. from Ashkabad, the capital town of Turkmenia. The site was explored by A.A. Marushchenko and excavated by V.M. Masson (1971). The site is actually situated on top of a low sandy hill on the southern edge of the Kara Kum (Masson and Sarianidi 1972:33-46).

Early Djeitun, primitive in character with an economy based largely on hunting and gathering, started in the sixth millennium B.C. Masson and Sarianidi (1972:33) have classified the Djeitun Culture in three developing stages:

Phase I— represented by the total assemblage of Djeitun Depe.
Phase II— represented by the upper layers of Chopan-Depe and some other sites.
Phase III— represented by the upper layers of Chagalli-Depe.

On the basis of $^{14}C$ dating, Phase II is dated to 5000 B.C. Considering this, it is probable that the date of phase I goes to sixth millennium B.C. Tosi (1973-74:29) placed this culture between Jarmo (6750 B.C.) and Tell-Es-Sawwan (5506 B.C. ± 73) Tepe Guran, Tepe Sarab and the Belt cave Neolithic are contemporary to each other.

**Phase I**: Type site: Djeitun Depe

Phase I of Djeitun Culture is characterized by geometric microliths made of flint such as blades, sickle blades, polished stone axes, bone tools, terracotta human figurines in stylized and flat forms, animal figurines (Goat and bovides, etc.), ornaments beads of turquoise and other semi-precious stones, bone and sea shells, handmade plain and painted pottery (a pale-red and coarse gritty textured handmade, 12 per cent painted with red) and one roomed houses of cylinderical mud bricks.

**Phase II**: Type site: Chopan Depe; Pessedjik Depe.

Phase II is represented by the upper layer of Bami, Novaya Nisa, Chopan-Depe, etc. In this phase, the site of Djeitun is deserted and probably people moved to these sites as these have yielded material remains of the early culture of Djeitun Phase I. However, at the same time, these sites have shown changes in the living-pattern. In a way they witnessed an advanced stage of Djeitun Culture. The phase is characterized by several one-roomed houses with a large room which has a lime plastered floor, at Pessedjik Depe. This hall might have been used as a community room. In this phase, stone was also used as building material wherever it was easily available.

As far as pottery is concerned, a new shape—globular pots—emerged and the bowls of Phase I survived. Painted pottery had decreased, from 12 per cent of Phase I to 3 per cent in Phase II. However, surprisingly new motifs had been added: net-like designs, dotted patterns, continuous loops, opposed triangles, etc.

Amongst the lithic artefacts, the major change is seen in the considerable decrease of geometric microliths and marked increase in sickle blades. This attests the efforts made for agriculture. Polish stone axes were now elongated. Pounders and mortars continued. Bone reapers with stone blades have been found intact. Bone needles and awls are in abundance. The tradition of making figurines was continued.

**Phase III**

For Phase III our knowledge is quite meagre. The top layers of Ghagalli Depe (Levels

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15 to 18) have yielded traces of this phase (Berdyiev 1966, 1968). The site of Chagalli Depe is small consisting of only 12 to 14 houses. The distinguishing feature of these houses is the existence of stone door-sockets indicating the use of hinged doors.

During this phase some new painted motifs emerged e.g. the plant motif, parallel zig-zag lines and criss-cross patterns, vertical wavy lines, rows of hooks, groups of straight vertical lines and rows of solid triangles. Some of the pots were painted on the inside. Artefacts included bone points, needles, sickle-handles in large numbers, polished stone axes, querns, pestles, etc. Clay animal figurines and triangular gamesmen are also present there but in smaller quantity. Beads in the shape of short barrels and cylinders are also recorded. It is significant to note that the use of copper was known to them, although only on a limited scale.

A short review of the Djeitun Culture assemblage will help us in assessing the economic trends of the Djeitun people. By and large, they had a mixed economy: hunting and gathering was more important than agriculture in the earliest phase, while a pastoral-cum-agricultural economy took over in the latter phases. Impressions of stalks and grains as well as grains of domesticated plants have been found in Phase I. The more developed forms of crops popular in the old World (Lisitsina 1965: 135) like the grains of two-row barley (Hordeum disticum) and two-row wheat (Triticum vulgare, Triticum compactum) have been noticed in the last phase (Phase III) of the Djeitun Culture at Chagalli Depe. Stock breeding was equally important for these people—domesticated sheep and goats were noted in Phase I, and domesticated cattle in Phase II at Chagalli Depe. The dog was present there throughout.

Hunting continued side by side though it decreased in time as evidenced by the quantity of wild animal bones found in different phases in decreasing number.

Regarding the social structure Masson and Sarianidi (1972:44-45) felt that

> each family was engaged separately in the manufacture of tools, in the processing of skins, in wood working and preparing food. . . .the Djeitun community was an amalgamation of nuclear families. Unlike Anatolia, with its large centres such as Catal Huyuk, Neolithic Turkmenia was a country of small and poor villages.

However, Gupta (1979:13) accepts this partly and offers a revised model for their social life in which

> Nuclear families formed the social unit but not the economic unit. . . . the whole village of Djeitun Depe appears to be a single big house with thirty airy rooms but without any arrangement which may be called 'Pre-planned'. It had no lanes, and no roads. It must have been a small village of well-knit families at a low stage of material culture in which each family was technologically independent but economically interdependent.

As far as contacts with outer areas are concerned, Masson and Sarianidi (1972:45-46) relate Djeitun Neolithic with contemporary cultures of West Asia—Early Neolithic Cultures of Syrio-Palestinian and Iraqo-Iranian groups. However, though reflecting some similar cultural traits, they possessed some major variations which prevent us from concluding that there was any direct connection between Djeitun and Jarmo-Jerico.

Excavators feel (1972:45) that northern Iran and southern Turkmenia shared a common neolithic culture (Kohl 1981 : XIV). However, one may disagree with the excavators' theory

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as northern Iranian cultures are not completely identical to the Djeitun culture.

We are on firm grounds in the observation that, during this period, Baluchistan was out of the interaction zone although the Baluchi Aceramic Neolithic, recently discovered at Mehargarh, was approximately contemporary to Djeitum culture of south Turkmenia. However, total assemblages of both the cultures did not yield any evidence of their interconnections. Morever, the latter had pottery while the former was without pottery. At the developed stage, Mehargarh Neolithic has yielded a more advanced stage of culture than the primitive stage of the Djeitun Neolithic.

Besides the Djeitun, Neolithic cultures developed, in other parts of Soviet Central Asia, independently and at a later stage. In other regions, Akcha Darya Delta, Sarykamysh Delta, Uzboi basin, etc., the change from Mesolithic to Neolithic was slow and depended largely upon semi-nomadism. These neolithic cultures, Kelteminar cultures, e.g. Caspian Neolithic, Gissar culture, etc., are later in date than the Djeitun Neolithic and flourished around the third millennium B.C. (Gupta 1979: 16-21).

## CHALCOLITHIC CULTURES

The Chalcolithic cultures of Soviet Central Asia cover a long period, from the fifth to the third millennium B.C. During this period, south Turkmenia was thickly populated as it has yielded a number of settlements in various regions—in the oasis and river deltas, along the northern foothills of the Kopet Dag chain of hills and in the Geoksyur alluvial fans.

Three major zones with a high concentration of chalcolithic sites have come to light (Gupta 1979:56).

1. Western Zone : From Kizil Arvat to Ashkabad, the capital of Turkmenia, with its sites at Koushut and Anau;
2. Central Zone : From Anau to Dushak with its type sites at Karadepe and Namazga Depe.
3. Eastern Zone : from Altin Depe and the other sites/in the lower reaches of the Chaacha-Sai and MeanaSai rivers to the delta of the Tedjen with its type site at Geoksyur 1.

Thus Koushut, Anau, Kara Depe, Namazga Depe, Altin Depe and Geoksyur are the major index sites for the Chalcolithic culture of south Turkmenia. The analysis of the cultural-repertoire from these sites has helped us in framing a good sequence of protohistoric cultures in south Turkmenia:

| | |
|---|---|
| Djeitun | **Neolithic** 5000 B.C. |
| Pre-Anau, Anau IA, Namazga I, Namazga II, Namazga III | **Chalcolithic** 3600-3000 B.C. |
| | **Bronze Age** |
| Namazga IV | 3000-2600 B.C. |
| Namazga V | 2600-2200 B.C. |
| Namazga VI | 2200-1500 B.C. |

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**Pre-Anau Culture**

Recent excavations have yielded the remains of an early chalcolithic culture at Chakmakli (Berdyiev 1968), Mondjukli Depe and Koushut. This is termed Pre-Anau Culture. The first two sites are situated near the village Chaacha, located in the region of the sub-montane area of south Turkmenia. Here it is significant to note that the term Pre-Anau used by Masson and Sarianidi (1972:50-51) represents a particular cultural complex which is distinct from the Anau IA and Namazga I complex. It has its own history of development in which the entire complex does not appear to belong to the Pre-Namazga cycle. Starting in the pre-Namazga levels, it certainly co-existed with Namazga I. Though the exact chronology for this early culture has yet to be worked out, its cultural details are fairly known.

This culture is divided into two phases: one is Neolithic in character and other is Chalcolithic. The lowest phase represents the Aceramic Neolithic culture at Chakmakli Depe.

**Chakmakli Depe**

The mound at Chakmakli Depe measures 83×60 m and 1.5. m in height. It has a total deposit of 2.85 m. The lowest level (5 of Building Period I) has been marked by the presence of flake tools, charcoal pieces and a few fragments of copper implements but surprisingly, no potsherd. This phase represents the Aceramic stage. In level 4 beautiful handmade painted pottery along with the material found in level 5 appeared. Succeeding levels have yielded floors decorated with red-ochre wash, a practice also followed by the Djeitun people.

Level IV (Building Period II) revealed the planned settlement : working and living areas. Houses built of rectangular mud-bricks, measuring 50 × 20 × 10 cm, were constructed on either side of the central street. One-room houses with a hearth and some houses with slightly large elongated rooms have also been reported. (Berdyiev 1968).

**Mondjukli Depe**

The site of Mondjukli Depe, belonging to Pre-Anau culture, has yielded the Djeitun Neolithic remains in the lower levels and Pre-Anau culture in upper levels. There is an overlap between the two. The same material has been noticed here also.

**Koushut**

Koushut is the third site where the pottery of this culture has been reported. This pottery is decorated with geometric forms filled with cross-hatching. The other domestic objects included terracotta spindle-whorls and a heavy copper awl. It represents the advanced stage of this culture.

This culture was later in date than the Djeitun as is evidenced at Mondjukli Depe where both occurred and overlapped. The origin of this culture is a problem that bothers archaeologists. Masson and Sarianidi (1972 : 50-52) have located its homeland in north central Iran. They relate the painted pottery of Pre-Anau to the standard ware of Hassuna IV-V and Sialk I.3 culture. However, Gupta (1979 : 62-63) has refuted their theory. He rules out the Gorgan Valley route for the so-called Sialk I.3 people as the foothills of Kopet Dag mountains have not yielded any trace of this culture. The second possible route for them could be via Nishapur and Meshad. This would mean crossing the huh-i-Hazar masjid ranges of north-eastern Iran to reach the Kopet Dag ranges where another jump was required to reach sites like Chakmakli Depe and Mondjukli Depe, and finally to Koushut. There is nothing in this area that identifies it with Hassuna IV-V and Sialk I.3. On the other hand, Aceramic levels

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are also a hurdle to accepting this. Gupta (1979 : 62) tentatively considers these Aceramic people as some local nomads.

On the whole, it appears that the Djeitun and the Aceramic Neolithic of Chakmakli Depe were contemporary in date, which can be safely dated to the seventh millennium B.C.; radiocarbon dates also support it. But it is doubtful if they were aware of each other. During the later stages, the Chakmakli people and the Djeitun people lived together also as the overlap of their cultures shows.

In our present study of pre-Harappan cultures, the most important point is the discovery of the pre-pottery Neolithic phase in south Turkmenia. Could this be related to Baluchi pre-pottery Neolithic culture at Mehargarh ? Our answer is 'no'. Firstly, this phase has been found only on one site and it was widespread and older and produced a long habitational sequence which witnessed the changing patterns of the cultural dynamics of human life. The culture is far more developed at Mehargarh than at Chakmakli Depe level V.

**Anau Culture**

Before Namazga I Culture there is another stage represented at Anau in IA, called the Anau culture, as Anau IB yielded the Namazga I material. The Distribution of this culture is confined so far to only two sites : Anau and Govich Depe. Anau pottery is characterized by sand tempering, well levigated clay, fine texture, thin walls and a well fired surface. The pottery shows with a very fine, thin light brown or light redish slip. Geometrical motifs are painted in matt black and among the vessels is a drinking cup decorated with large figures with cross-hatched bodies (Schmidt 1908 : 104—115).

Anau IA pottery is similar to a group of Anau IB pottery, a fact which suggests the generic relationship between them. Masson and Sarianidi (1972 : 50) relate this (Anau) pottery with the pottery found in Iran. Gupta (1979 : 64-65) has again questioned this correlation, according to him, this was a local affair.

No similarity with any Baluchi culture has been traced so far.

**Namazga I**

Namazga I heralded a new epoch in the history of south Turkmenia. Thence onward the period of short-lived local cultures disappeared and long habitational sequence appeared. A number of settlements of this period have been found along the foothills of Kopet Dagh mountain : 20 sites approximately in the central zone, 10 in the western zone and a few in the eastern zone. However, these sites are small and usually cover 2.5 to 3 acres. All this attest the demographic increase followed by an expansion in space in small groups. During this period, Geoksyur Valley was also inhabited though this region is far from the Kopet Dag mountains of the Central Zone. The Namazga I people established their colonies in two areas watered by the Tedjen. The Sarakhs oasis on the upstream and the Tedjen oasis in the delta. Dashlidji Depe, Yalangach Depe, Akcha Depe and Geoksyur I are some of the important sites (Masson & Sarianidi 1972).

Unfortunately none of these sites has been excavated extensively for a clear idea of village planning. One-room houses built of rectangular mud bricks, have been found in the western zone. However, the site of Kara Depe, which falls in the central zone, was excavated on a large scale. It has yielded the remains of a large building with round storage pits meant for protecting the grain from dampness. The walls were built of rectangular mud bricks tempered with straw. The surface as well as the floor was plastered with clay and painted with red ochre.

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Near the entrance, stone sockets have been reported.

The most noteworthy discovery is the presence of shrine rooms at Anau and Yassi Depe. The interior is painted with red triangles enclosed in black frames and red chequered squares. No cult objects were found in these shrine-rooms. As the tradition of painted shrines are very old in Mesopotamia, Iran and Anatolia, Masson and Sarianidi (1972 : 59) connect this feature with the Mesopotamian tradition while Gupta (1979 : 68-69) and Tosi (1973-74) both connect this with the old trait of painted shrines in south Turkmenia itself-a room painted with jaguar figures and other 200 geometric subjects existed at Passedjik Depe in the Late Djeitun context which may have provided the appropriate model.

Terracotta female figurines have been unearthed but none from the shrine rooms. Sheep and cattle figurines have also been reported.

As far as the artefacts are concerned, flint sickle-blades were used along with bone and copper pins or piercers. Flint tools are gradually replaced by copper tools such as pins, awls, needles, chisels, knives and possibly the sickle blade. Terracotta and spindle whorls in large numbers suggest improved technique of weaving and spinning.

Beads of carnelian, turquoise, other semi-precious stones and also of copper, have been reported. A few copper miniature pins with pyramidal knobs have also been noticed.

The pottery of Namazga I is a handmade chaff-tempered ware : both coarse and fine. On pottery, geometric motifs are usual and goat and plant motifs rare. Sometimes the vessel was also painted on the inside. The most popular shape is a deep cup with a margin without a profile, with a low flat, slightly concave base.

Agriculture (Dolukhanov 1981 : 354-383) and stock-breeding both were practised. The two-row barley and two-row wheat were cultivated on a large scale. Digging sticks with ring stones have been used for ploughing. Sickles with flint blades were used for harvesting (Korobkova 1981 : 325-349).

Domestication of animals was practised on a large scale. Dashlidji Depe (Khlopin 1960) has yielded a large number of animal bones belonging to domesticated varieties. Sheep and goat, however, were preferred to cattle. Wild animal bones, however, are reported only in limited quantity.

The dead were buried within the habitation but not under the living areas. The dead body was placed in a flexed position. The grave-goods included, normally, objects of personal adornment.

No specific indication of contact with Baluchi chalcolithic cultures was traced in the antiquities of this period. However, the general cultural level of small agricultural villages was present there.

**Namazga II**

Namazga II culture is best represented at Anau, Kara Depe, Namazga Depe and Elen Depe. However, the culture was not confined to the central zone, it also appeared in the Geoksyur oasis (Khlopin 1964). It has, however, some regional variations although the overall uniformity is maintained throughout south Turkmenia (Kuftin 1956). Geoksyur I, Yalangach Depe, Mullali, Anau, Akcha, Gong, Geoksyur 7, and Geoksyur 9 were inhabited during this period in the Geoksyur region (Masson (1962 a-b).

Some major changes took place in the pottery repertoire. New forms. such as jars and shallow dishes, originated. Polychrome painted designs, mostly arranged in symmetrical panels have been executed usually on the shoulder of the pots. Sometimes the whole pot is painted.

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*Fig. 2.3*

The painted motifs included triangles, rhombs and bands in vertical panels; zoomorphic designs such as goats, human beings in stylized forms. At Anau, plain wares are more common than polychrome.

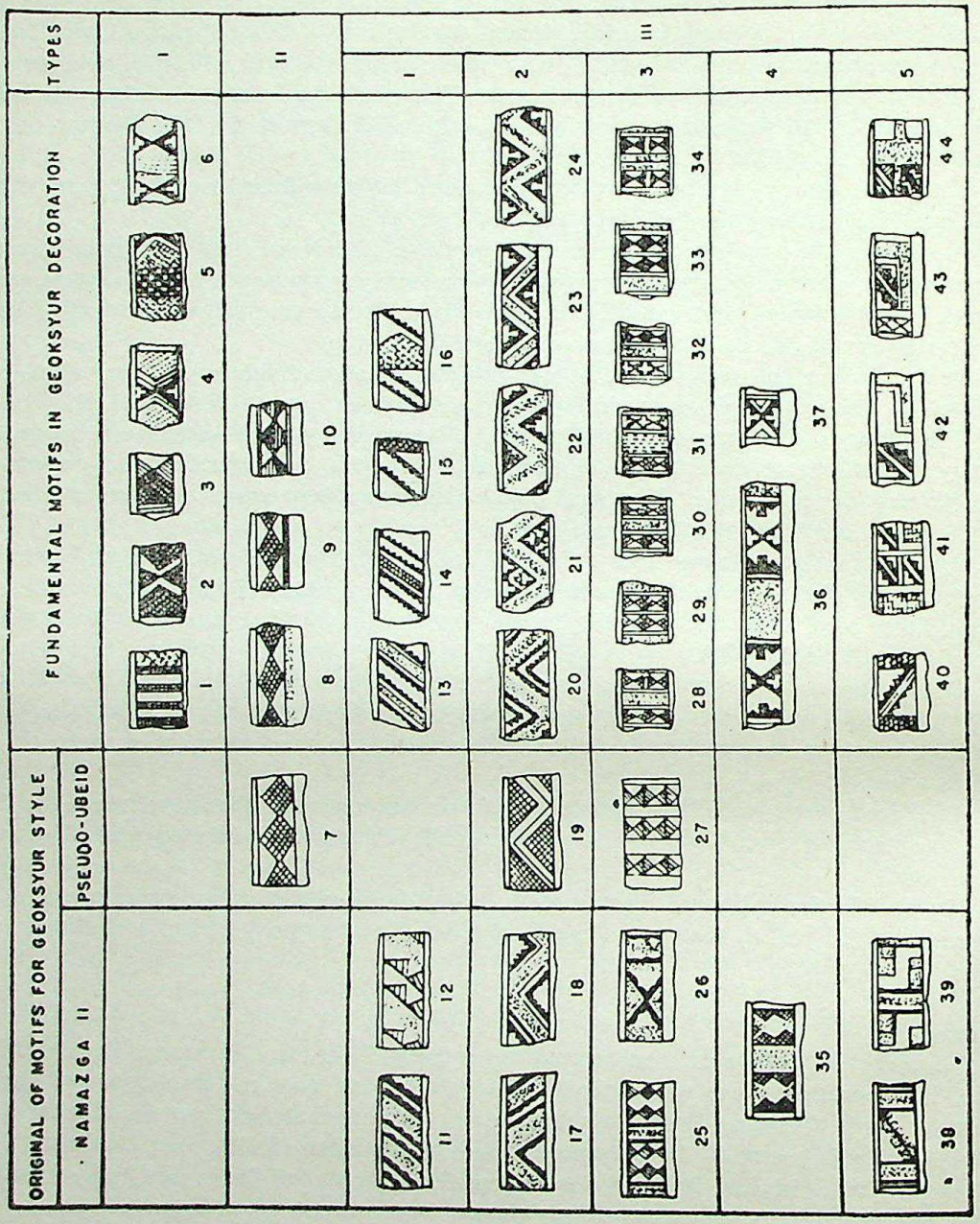


Fig. 2.3. Namazga II—Painted pottery designs.

Kara Depe has been divided into two phases: Early and Late (Masson 1960).

The Early phase of Kara Depe has yielded more polychrome than monochrome and plain wares. Red-slipped hemispherical bowls, often burnished bowls, are important types. The

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late phase shows a significant decrease in the polychrome ware and increase in the monochrome ware with zoomorphic motifs. Houses were built with rectangular mud-bricks and walls were plastered with mud. Sometimes the floors were paved with bricks. Sometimes pithos shaped vessels were dug into floors. The doors usually have stone sockets.

The latest levels of the late phase of Kara Depe show the grouping of mud brick houses in two to three complexes separated by long thick walls. Each of these complexes comprised living and domestic rooms. In this level, polychrome occurred no more and monochrome painted ware with beautiful friezes of geometric patterns and schematized goats, became popular. The plain grey and burnished red wares are also conspicuous by their presence.

The lithic industry of Namazga I continued in Namazga II also. It is marked by flint sickle-blades, denticulate blades, mortars, pounders, querns of sandstone and ring-stones of limestone. Metal tools also occurred in the form of awls, a heavy axe, a razor and spearheads as well as pins with pyramidal heads and ornaments of twisted wire from Anau. Besides, some bone tools have also been noticed.

Seated terracotta figurines have been found in a limited number. These were new to the area, and some are painted with zig-zag lines. An animal terracotta (the goat) has been found. A terracotta cart-wheel with projecting hubs is a significant discovery since it throws light on the mode of conveyance.

In the Geoksyur region some regional variations have been noticed (Khlopin 1964). Here, the settlements of this period e.g. Geoksyur and Yalangach Depe are completely or partially surrounded by a defensive wall with round towers at regular intervals. Houses containing a central room and a number of ancillary rooms have been reported from the site of Yalangach Depe. A shrine with a clay podium has been found on the eastern side of these complexes: the podium has two parts—one has traces of burning indicating its use as an altar; the other was a dwelling.

Terracotta figurines have been found in large numbers at Yalangach Depe. One gives a complete seated look. Namazga II people had elaborate burial system. Burials were laid in the wastelands of habitation. A number of burials have been reported. They are of two types: in one type the arms were stretched besides the body and in the other the right arm was straight but the left arm was bent.

At Kara Depe burial pits lined with mud-bricks have been found containing the dead in flexed position facing right. An example of collective pit-burial is also noticed. The grave-goods included the personal ornaments—necklaces, bracelets, beads, etc.

The economic pattern of Namazga II people was based on agriculture. Charred seeds of two-row barley and two-row wheat have been unearthed in the excavations.

Domestication of animals increased to 90 per cent. Goats and sheep outnumbered the cattle. Hunting was reduced. The wild animals included only the horse, gazelle, deer, boar and fox.

Was there any relationship with Baluchistan at this stage? At present, this is difficult to visualize. The only possibility lies in the polychrome wares found in Baluchistan: Kechi Beg and Nal as polychrome wares were used by the Namazga II people also. By and large, south Soviet Central Asia, north-western Iran, Afghanistan formed one big cultural-geographical area in the fourth millennium B.C. in which, for the first time, we note a similar trend adopted all over—whether it be in ceramics, specially pottery decoration or lithic industry, or clay figurines and this was only possible with people moving within same cultural area.

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**Namazga III-Culture**

A number of sites, often covering large areas, belong to the Namazga III culture e.g. Kara Depe, Gara Depe, Namazga Depe, Ulug Depe and Altin Depe in the central zone and Geoksyur I, Chong Depe, Khapuz Depe, etc. in the Tedjen delta (Tosi 1973-74:46-54; Kohl 1981). But the Tedjen delta, during the last phase of Namazga III, was silting up and the established channels changed their courses off and on (lytsyna *et. al.* 1965). The fertile delta became a dry area. The Tedjen delta, as noted earlier, saw the emergence of chalcolithic cultures in late Namazga I. But then there were only three sites. Slowly and gradually more people moved in. In the Namazga II period, the number of sites increased to eight. In Namazga III times, the situation reversed since now we have only two sites; others were obviously deserted. The significance of this will be noted later. However, Geoksyur 1 was practically always occupied through all three periods (Sarianidi 1960, 1965).

Back to the central zone, Kara Depe Ia and Ib levels have yielded Namazga III material (Masson & Sarianidi 1972:75 ff).

The Soviet archaeologists have dated this material to being between 3000 B.C.—2500 B.C. Radiocarbon dates make it 2750±220 B.C. Lamberg-Karlovsky (1973) suggested the middle of the fourth millennium B.C. for it and Gupta (1979:90) has it between 3200-2700 B.C. However, Kohl (1981: xxxi) has rightly bracketed this period between 3600 and 3000 B.C. During this period, several tribes migrated to south Turkmenia. The indirect outcome of this culture-contact situation is reflected in the improvement of the irrigation system, remodelling of the village plan and enlargement of the housing units. The direct outcome could be seen in the decorative motifs, terracotta figurines and artefacts. In its late phase, the migration took place again and this time it was from south Turkmenia into Afghanistan, Siestan and Baluchistan.

In this period, the polychrome wares of Namazga II disappeared completely and a richly decorated monochrome ware, alien to this area, emerged. Kara Depe Ia-Ib levels yielded both fine and coarse varieties. By and large, the fine ware is made of well levigated clay and a light red or buff slip is applied to the surface. The designs are painted in black and sometimes in a black and red mix. The motifs included a number of geometric designs, particularly crosses and stepped pyramids, and a limited number of zoomorphic representations, particularly the goat.

Kilns were improved and located in groups in selected areas of habitation. Pottery forms are marked by shallow plates, basins, biconical vessels and hemispherical bowls. At Kara Depe we get a small number of polychrome sherds but different from the Namazga II polychrome ware. Painted pottery of polychrome variety also appeared during the Geoksyurian chalcolithic. Mostly handmade some, however, are also wheel-thrown. This polychrome ware is also different from the Namazga II variety. It is a red slipped ware, characterized by deep bowls, painted with red and black, or simply black pigment. The painted motifs include panels of crosses enclosed in red polygons, or maltese crosses, rhomboids, chequers, triangles, bands with serrated edges and zoomorphic representations.

According to Masson and Sarianidi (1972:85), there is a clearly defined affinity between the Geoksyurian painted pottery and the buff ware from the south-west Iranian sites, e.g. Tal-i-Bakun. But this view is not accepted by many archaeologists, e.g. Khlopin (1964:70-73) traced the origin of all these motifs in the pre-existing motifs of south Turkmenia itself. Gupta (1979) supported the latter view.

The monochrome painted pottery has been compared with the pottery of Sialk 4-7 and

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Hissar IC-IIa on the basis of painted geometric designs and zoomorphic motifs. A limited quantity of plain thin grey ware was also in use.

The village of Kara Depe (Masson 1960) showed planned development since houses were found built along narrow lanes which finally met at a central point. Now the houses were multi-roomed structures along with a separate courtyard and a storage bin in one of the rooms. Special places for throwing refuse were alloted on the outskirts of the village. These features are so typical to Namazga III that practically every site has yielded a similar village plan. In the Geoksyur Oasis (Sarianidi 1960) sites like Geoksyur I revealed an identical settlement.

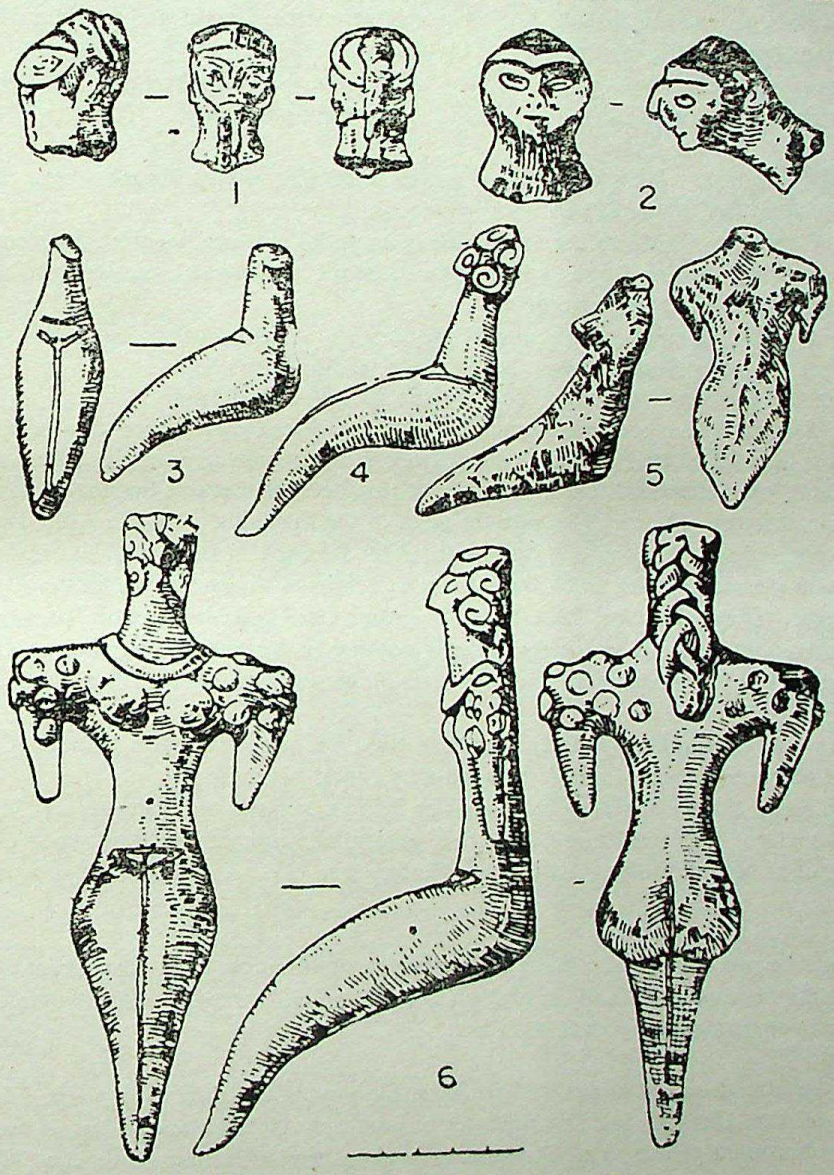


Fig. 2.4. Kara Depe, Namazga III, Female figurines.

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*Fig. 2.4*

In the name of religion, some terracotta seated female figurines, an anthropomorphic deity flanked with two human beings, painted on a potsherd, three male figurines (priests), and an alabaster bull statuette probably used for cultic purposes, could be referred to. There are some pig and cattle figurines also in terracotta, used possibly as toys.

Copper objects are not well represented; we have nothing more significantly than for a few fragments of a knife and a few examples of awls and piercers. There are some long triangular pins with flat tips and thick butts, rings and bracelets. Copper was a scarce metal and probably imported from Iran (Terekhova 1981:313-324).

Terracotta seals and stone seals bearing simple geometric designs and a perforation at the back, are also characteristic features of this culture.

The weaving technology is attested by a few bone points and a large number of conical whorls. Alabaster was used for making both the vessel and statuettes. This was also imported from Iran.

The lithic industry included querns, pestles, mortars, weights, door-sockets, balls with a circumferencial groove, made of various hard stones.

The Geoksyurian sites have been very rich in material culture yielding terracotta animal figurines, a variety of ring stones, spindle whorls, stone arrowheads, beads, pots, bone objects and various types of small copper objects.

People depended largely on agricultural produce and animal husbandry. With the growth of population, mobility increased and that inspired trading activities.

Some of the Geoksyurian people buried their dead in round family vaults, built of mud-bricks. A few of them are rectangular in shape. These graves were always located in the abandoned areas of the settlements. The chambers were underground, reached through an entrance, and used repeatedly. It is only when the vault became full that a new vault was built near or over the old one. Outside the delta in the foot-hills, sites like Altin Depe witnessed simple pit burials. Masson and Sarianidi (1972: 86) connect these burial chambers, known as *tholoi*, with the rectangular, brick built chamber tombs with several skeletons at Ali Abad near Susiana. They also feel that the polychrome Geoksyurian Ware of Namazga III owes a lot to Iranian cultures. Surprisingly, there is nothing in Susiana comparable to Geoksyurian Ware. Gupta (1979:109) considers them a general influence from Iran rather than an Iranian invasion or colonization.

Masson and Sarianidi (1972:85) have also tried finding connections between Geoksyurian objects and southern Mesopotamian seals amulets, metal pins, etc.

By and large, these traits may be treated as being a general influence from Mesopotamia and north-western Iran resulting from the occasional contact amongst people in this vast region instead of regular traffic invasion or colonization. Gupta (1979:109) has rightly pointed out that:

> Changes do not always take place under foreign domination, they also occur under local permutations and combinations and get accelerated either under some dynamic leadership or else in some culture-contact situation.

After the abandonment of the Tedjen delta, the population-shift took place. Tedjen is an extension of the Harirud which originates in northern Afghanistan. Thus, it was somewhat easy for an uprooted people to reach Herat following the river course from the Tedjen delta. However, the intermediary sites are yet to be discovered and, unless they are located, our

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surmise regarding the route of migration shall remain tentative.

Significantly enough, Namazga III pottery has been found at Mundigak III, Shahr-i Sokhta I, Mehargarh VI-VII and Damb Sadaat II-III. Supporting evidence is present in the form of leaf shaped arrowheads, double spiral-headed pins, compartmented seals, etc. The painted designs, spread over a very wide area, show affinities between Geoksyurian ware and Quetta ware. These are stepped lozenges, chequered panels, various types of crosses, the T-shaped motif, the sun symbol and plant motifs (Masson 1962 B).

Tosi (1969:283-286) has highlighted the similarity between Kechi Beg pottery and Namazga III pottery, although it hardly accounts to 15 per cent of the total collection.

Thus, the overall picture that emerges from the above studies shows that the people for the first time, moved out from south Turkmenia and reached southern Afghanistan, Siestan and northern Baluchistan—the Quetta-Bolan region, mainly during Namazga III times. It is significant to note that southern Afghanistan and northern Baluchistan were both passing through the chalcolithic phase during the late fourth millennium B.C. At centres like Mehargarh, the Turkmenian element co-existed with local talent, while, in smaller sites like Damb Sadaat, the Turkmenian overpowered the local elements. In Siestan, they chose a large site and settled down at Shahr-i Sokhta. However, even at Shahr-i Sokhta I, the painted motifs are not completely Geoksyurian—some non-Turkmenian elements have also been noticed.

In time, the Geoksyurian lost touch with their homeland and merged into the local population—in Shahr-i Sokhta II one cannot easily distinguish Geoksyurian elements in separate groups.

## BRONZE AGE CULTURE

Late Chalcolithic villages finally turned into Early Bronze Age towns in south Turkmenia. In the process, the number of settlements reduced, but the size of the settlements increased considerably.

The Bronze Age of Central Asia has been divided into three periods: the Early Bronze Age (3000 B.C.-2600 B.C. Proto-urban)—Namazga IV; the Middle Age (2600 B.C.-2200 B.C.-urban)—Namazga V and Late Bronze Age (2200 B.C.-1500 B.C. non-urban)—Namazga V-VI. These dates are based on Kohl (1981) who uses MASCA corrections and long chronology in place of the short chronology of Masson and sarianidi (1972) who relied upon radiocarbon dates and occasional parallels with Iranian and Mesopotamian objects.

The abandonment of all chalcolithic sites in the Tedjen delta was probably due to hydrological reasons (the drying-up channels), and that resulted in a migration partially to the Akmazar and Chacha river basins at Altin Depe and Ulug Depe, and in the colonization of several new areas in the central zone—in the vicinity of Artyk-Baba Durmaz (Taichanak Depe, Shor Depe, Kosh Depe). This movement opened new vistas for the Early Bronze Age, which witnessed improvements in several technologies and ushered in a few new ones.

Namazga IV (lower levels) represents this stage (Kohl 1981; Kircho 1981). It ushers in the potter's wheel, copper smelting furnaces, elaborate furnace for pottery making, stone and terracotta seals, toilet boxes, but architectural pieces in typical Namazga III patterns. The tradition of building monumental structures started in this period—the beginning of urbanism. These structures brought economic as well as social changes in a newly emerging society. For the first time, a large terraced temple is noticed at Altin Depe and a new priestly class emerged in society (Masson and Kiiatkina 1981: 111).

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In this phase, big houses with interconnected rooms and courtyards have been noticed, e.g. at Altin Depe, Ulug Depe, Khapuz Depe. Kitchens with hearths were separate. Domestic shrines(?) along with clay podium also existed at a few sites.

The fortification wall seems to have been a part of town-planning. However, we do not have details as the sites are not fully excavated. Altin Depe has yielded doubtful evidence of its kind—a massive wall—60 m thick, and about 5 m high (Ganialin 1967:207-13, Kircho 1981:97).

Namazga IV pottery is wheel-made and monochrome. The designs are painted in black or brown over a light red or buff surface. These are purely geometric, arranged in friezes. Animal and plant motifs are very rare. On some vessels, birds and goats standing between two trees are painted. Pottery included goblets with somewhat straight sides and sharply sloping base, hemispherical bowls, cups, conical cups and ribbed vessels. All of them originated in the Geoksyur region. Some unusual forms also appeared at Anau and Namazga Depe, e.g. a high-necked water pitcher with a short trunk, long bottom and painted sloping-shoulders as well as the disc-based vessel with a carinated profile, the neck being painted with a plant motif.

Some burnished grey ware pots with an incised decoration were also found. This ware was probably imported from sites like Tureng-Tepe and Shah Tepe (Arne 1945).

Two copper smelting furnaces have been reported from the outskirts of the town of Kapuz Depe. Copper slags and clay ladles with traces of molten copper attest to a local production. However, more material is necessary before we can detail the process.

Terracotta and stone figurines have been found in large numbers. Along with female figurines, a number of male figurines have been discovered. A group of grey coloured standing figurines from Ak-Depe has come to light. Similar figurines have been reported from Tureng Tepe also.

Altin Depe has yielded a small number of terracotta wheeled carts. The tool-kit included stone tools, as well as bronze and copper ones. Amongst the stone tools, the pressure-flaked, bifacial, flint arrowheads of two types are reported : the leaf shaped and the tanged variety (Masson and Kiiatkina 1981).

Metal tools exist in awls, piercers, needles, long pins with flattened heads and miniature pins with bipyramidal tops, pins with stepped pyramidal heads or cruciform objects (Terekhovra 1981).

The other cultural milieu included turquoise, carnelian, lapis, tin, silver objects. The raw materials for all of them are not available in the neighbourhood and may have been imported from a long distance: turquoise from Kysyl Kum; lapis from Badakhshan and tin from Bhukhara and Ferghana. This itself attests the existence of a trading network.

With the development of trade, the necessity for seals may also have been realized. The seals were made both of clay and stone. They are characterized by geometric designs. Beads, pendants and statuary were skilfully carved out of semi-precious stones.

Domestication of plants and animals was continued on a larger scale. In this period, the camel appeared for the first time. Recent studies indicate that, by this time, the Predesertic steppes goat and sheep had already started replacing beef, cattle, and pigs. Large herds of goat and sheep may have augmented the food supply (Gupta 1979:149).

So far, we do not have much evidence of agricultural produce in this phase. But obviously it had increased—the grape Vine appears on all Namazga IV sites.

The disposal of dead was in complete inhumation. The dead were laid singly and collectively in rectangular chambers of mud-bricks. Early Bronze Age Cultures of Soviet Central

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Asia, it may be pointed out, were in contact with the north Iranian group of cultures as is evidenced by the occurrence of incised grey ware which characterized the latter.

For reasons of extremely limited exploration and excavations in the intermediary areas, it is difficult for us to establish the contact routes between Soviet Central Asia, Siestan and India. However, on the basis of a similar cultural milieu, spread over a wide area, it appears that the entire area—south Turkmenia, Siestan, Afghanistan, northern Iran, Baluchistan—formed a most active interaction area in the early third millennium where every area was autonomous, developed independently and at the same time shared each other's experience through trade.

In Central Asia, the Early Bronze Age cultures gave birth to urban cultures in the Middle Bronze Age. The upper levels of Namazga IV and V represent this phase. There were only four settlements belonging to this phase: Namazga Depe, Ulug Depe, Altin Depe and Khapuz Depe. Monochrome pottery, completely devoid of paintings and in slightly yellowish and red washes, is one of the main characteristics of this phase.

Namazga V culture is marked by monumental structures, multi-roomed housing complexes, arranged along narrow streets, craftsmen areas, kilns and advanced metal technology (Masson and Sarianidi 1972).

These south Turkmenian urban centres successfully maintained cultural contacts and trade relations with contemporary cultures. Contacts with these cultures flourished in Afghanistan, Baluchistan and the Indus system. A number of Harappan objects found on Central Asian sites and the location of the Harappan trading-post of Shortugai on the Oxus emphasize their close commercial contacts.

As we are only dealing with pre-Indus cultures, the later periods are not covered in this book.

## BALUCHISTAN—THE NUCLEAR ZONE

Soon after the startling discovery of Mehargarh, Gupta (1979 a, 1979 b) raised a very vital issue: was Baluchistan a nuclear zone or a refuse area of the protohistoric cultures of South Asia? Eversince the excavation of its ancient sites, Baluchistan has been viewed not as an area of autochthonous cultures but as the region where cultures developed as a result of eastward diffusion of Iranian cultures. McCown (1942), Piggott (1950), Wheeler (1953) Allchins (1968), Fairservis (1971) and Sankalia (1974), not to speak of Gordon (1960) and Subbarao (1958) perpetuated this myth. Practically, all of them went a step further and treated Baluchistan as a corridor through which cultural influences went from west to east, i.e., from Mesopotamia and Iran to the Indus.

In the recent past, despite a number of fresh excavations and startling discoveries in this zone (Iran—Soviet Central Asia—northern Baluchistan—Afghanistan) many scholars refuse to change their old stand (Sankalia's review of Essays in Indian Protohistory 1980).

The only perceptible change is in the routes of diffusion under the impact of various writings on the archaeology of Soviet Central Asia. They feel that al least one route passed via Turkmenia and Afghanistan. The arid geo-physical character of Baluchistan as the sole constraint to an indigenous growth of cultures continues to be the most popular argument with scholars. But not one of them thinks that, when chalcolithic cultures were sustained for thousands of years in the arid character of the land why could they not originate in the same ecology? Even a casual study of the landscape of rivers like the Bolan, Zhob, Gomal, Helmand

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is sufficient to show that there was neither dearth of water nor good earth to generate the birth of cultures in this region. All of Baluchistan has a network of rivers in whose valleys the early cultures took their birth and developed.

*Fig. 2.5*

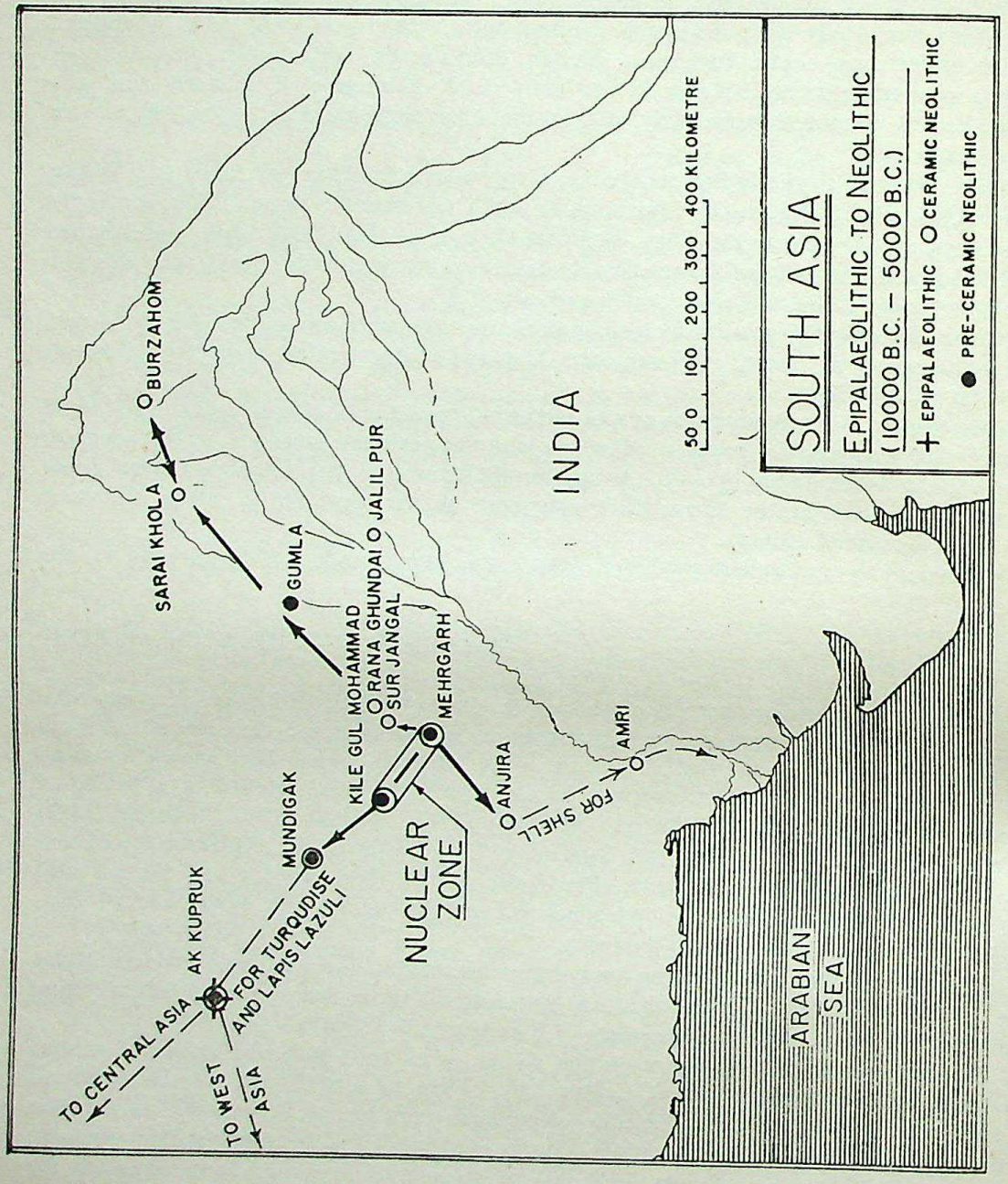


Fig. 2.5. Map of South Asia showing sites of Epipalaeolithic to Neolithic.

The answers to the following questions may throw some significant light on the character of Baluchistan and the nuclear zone of early cultures of South Asia.

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1. What is the antiquity of cultures in Baluchistan?
2. Is there a continuous sequence of cultures in this area?
3. What is the basic character of the earliest Baluchi cultures and how for does it tally with that of the early cultures of Iran and Iraq?
4. How do we visualize the semi-nomadic migrations in this area?
5. What is the archaeological evaluation of Baluchi interaction with neighbouring regions?

In order to try to answer these questions we need a key or index site. Unfortunately, older scholars had no sueh site and, therefore, were forced to indulge in all kinds of pottery correlations to work out an acceptable sequence of cultures. In this, as said earlier, they failed miserably. Now, for the first time, we have Mehargarh (Jarrige & Lechevallier 1979; Jarrige & Meadow 1980).

## NORTHERN BALUCHISTAN

The discovery of a pre-pottery neolithic phase at Mehargarh has provided us with a solid base for considering Baluchistan a nuclear zone. Mehargarh takes the antiquity of habitational deposits in this region back to the seventh millennium B.C. since the radiocarbon date from the upper levels is the sixth millennium B.C., though the lowest level is still undated. These dates take the site closer to many pre-pottery neolithic sites in Western Asia. The site, as a whole, covers an area of more than 200 hectares (nearly 495 acres). So far, a cluster of five localities have been demarcated which represent the occupational debris of a single large settlement. In fact, it was made of many smaller settlements, each one established after the complete or partial abandonment of some earlier one, although the site was continuously occupied. It is in the course of three or four thousand years, that the remains of these successive settlements came to cover the entire area. During the neolithic period, only the northern and eastern parts of the site were occupied.

The significance of this neolithic settlement at Mehargarh lies in several factors: first its crucial location which is at the Bolan pass, the most popular route in the entire history of India; secondly, its location which is on the bank of a perennial river, the Bolan; thirdly, the thickness of aceramic neolithic deposit which is abnormally thick in comparison to other neolithic deposits in South Asia, implying continuous culture-growth, on the spot model; and lastely, but most importantly although completely devoid of pottery and, therefore, very primitive, it maintained long distance contacts for procuring items like lapis lazuli, turquoise, sea-shells and copper. The site has, moreover, yielded the remains of settled farming communities and not communities for exclusively practising hunting. The site provides us a continuous sequence of agriculture-based cultures right from the seventh-sixth millennium B.C. through the middle of the third millennium B.C. After that, the site was deserted although a Harappan settlement has been reported at Nowsharo, just nearby. Thus, the area as a whole, if not the actual site, was inhabited throughout the third millennium also.

A decade ago, we would hardly visualise the existence of an Aceramic Neolithic phase of culture in Baluchistan though Fairservis (1956: 222, 335, 349) had discovered definite traces of it a long time back at Kile Gul Mohammad. This brings us to the question of its origin. We shall take it up later in detail, here it is sufficient to observe that no pre-pottery neolithic site, like Mehargarh I, has been excavated in neighbouring regions to which the origin

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of Mehargarh I could be traced; comperable sites are found only beyond the Zagros. The pre-pottery neolithic sites in the Kashmir Valley appear to be its late contemporary and not earlier. We are thus in favour of the autochthonous theory of Mehargarh's origin and development. However, Jarrige (1984 b: 22) the excavator of Mehargarh believes that despite several original features this aceramic neolithic assemblage of Mehargarh offers too many similarities with several early farming settlements of Western Asia not to imply a certain degree of synchronoism. Several of the parallels we have established between the aceramic settlement of Mehargarh and some early villages of the Zagros piedmont, in a context marked by transition from hunting to herding and plant domestication, cannot be the result of mere coincidence; they imply a certain degree of information and inter-relation, despite the distances, through out the vast geographical system between Mesopotamia and the Indus and the Kara Kum desert and the coast of the Gulf. In that respect one must not believe that the Kachhi plain is a marginal zone or a sort of refuge area for outdated cultural assemblages. This region, at the foot of the Bolan Pass is part of a long-range communication network connected with Central Asia and the Iranian Plateau. Occurrences of sea shells, turquoise and lapis in the aceramic levels of Mehargarh illustrate well the wide range of connections of this site in an early context.

He further addes that "the presence of an important neolithic substratum in Baluchistan on the margin of the Indus Valley, means that it is no longer valid to interpret the archaeological remains of the fourth and third millennia B.C. in Baluchistan and the Indus Valley in the light of constant diffusionary mechanism. But the problem of the origin of Neolithisation of Baluchistan remains the same. There are so far no remains reported from this region which could be connected to a proto-neolithic stage, which as in Palestine or the Zagros area, from 12000 B.C. onwards corresponds to a phase of incipient cultivation. Some of the similarities which exist between early villages of the Near East and the neolithic settlement at Mehargarh could be the result of a direct diffusion of neolithic cultural assemblage from Western Asia to the Indus system. But one must not exclude the possibility of further discoveries, which could indicate that this region was not an archaeological vacuum before the beginning of the occupation of Mehargarh. Some original aspects of the process of domestication of animals and plants could imply an earlier stage of exploitation of the natural resources of the region by people whose remains are still to be found."

He further quotes the evidence from Aq Kupruk: "At Aq Kupruk Dupree has found evidence of an epipaleolithic assemblage with a microlithic component dated, according to $^{14}C$ to 14665 B.C. (Dupree 1972:75-7). A very interesting element of this assemblage is provided by the analysis of faunal remains with sheep and goat representing 89% of the identifiable bones.

In the non-Ceramic Neolithic of Aq Kupruk II dated $^{14}C$ to 8566 B.C. and 6960 B.C. fully domesticated goat and sheep are present (Perkins 1972:73; Shaffer 1978:71-89). From such evidence it appears that we do have an early domestication of sheep and goat preceded by an exploitation of their wild predecessors by local people during the Upper Palaeolithic.

Work of Soviet archaeologists has also given evidence of Epi-palaeolithic and Mesolithic cultures in southern Tadjikistan. Vinogradov (1979) has located many Mesolithic and Neolithic points in north western Afghanistan, south of Amu Darya at the zone bordering the desert. The geometric microliths found at some of these 'points' present some similarities with the microliths of Mehargarh in particular the trapezes with a concave back of the Intermediary and Upper levels of Period I and II. Evidence of sequences from Palaeolithic to Late Neolithic in Soviet Central Asia and Afghanistan shows the importance of local evolutionary processes.

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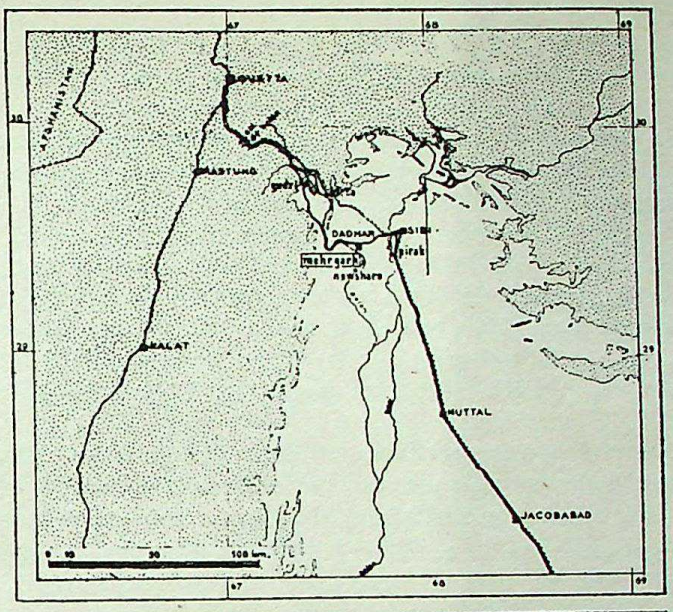


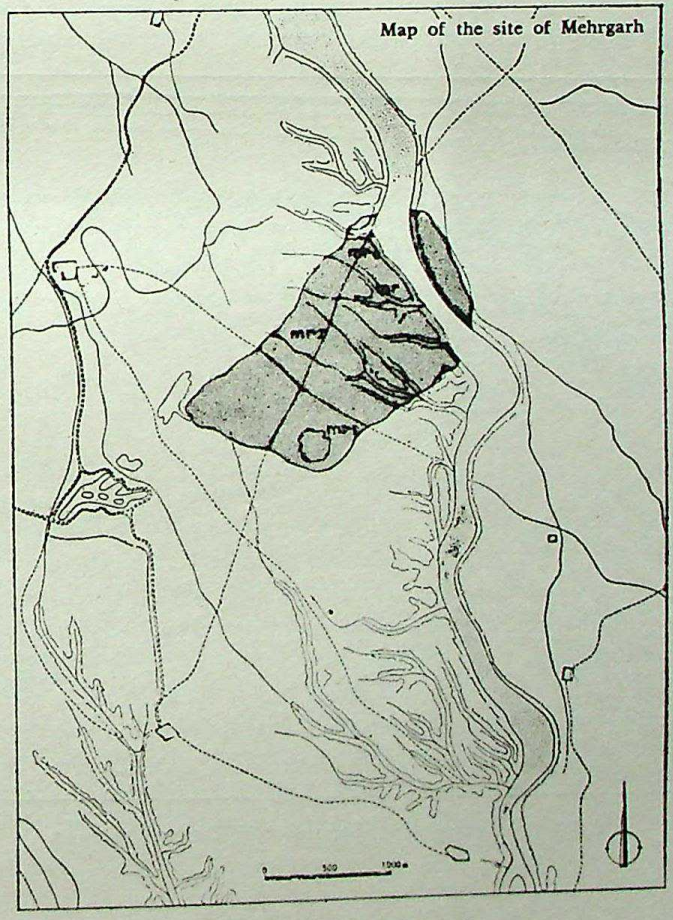


Fig. 2.6. Site of Mehargarh.

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in regions which were, not long ago, very poorly known."

Next the recovery of items like lapis lazuli, copper and turquoise, from the pre-pottery Neolithic through the different periods of Chalcolithic to the early Bronze Age at Mehargarh, definitely place this area in the prehistoric culture interaction zone.

In Baluchistan during the seventh millennium B.C. there were at least two sites in the Quetta-Bolan region which were occupied by the neolithic people who did not know the use of pottery: Mehargarh I and Kile Gul Mohammad I. Fairservis (1956:349), however, referred to one more site Q. 29 of the same character. It is an isolated site located in the extreme south, near the Baleli Gulistan road which traverses it from east to west. Locally, it is known as the 'Baleli mound'. Rana Ghundai, in the Loralai Valley, could be a similar site, since the excavator, Ross, (1946) had not reached virgin soil and his period I represented pottery neolithic. In the Gomal plain, however, we have the definite remains of this phase at Gumla I (Dani 1970-71:39,41). Therefore, that Mehargarh was not an isolated pre-pottery neolithic site.

*Fig. 2.5*

This distribution of pre-pottery neolithic sites shows that Mehargarh was the southernmost site and Gumla was the northernmost site and both of them were located on important routes. Further, excavations, conducted horizontally at Mehargarh, have yielded enough material to reconstruct a coherent picture of the pre-pottery neolithic cultures of this area.

*Fig. 2.6*
*Fig. 2.6A*

More than 700 square meters of the upper neolithic levels at Mehargarh, locality 3 (MR 3) have been uncovered revealing the plan of a farming village at the site. The settlement consisted of multi-roomed, rectangular, mud-brick units separated from one another by open spaces

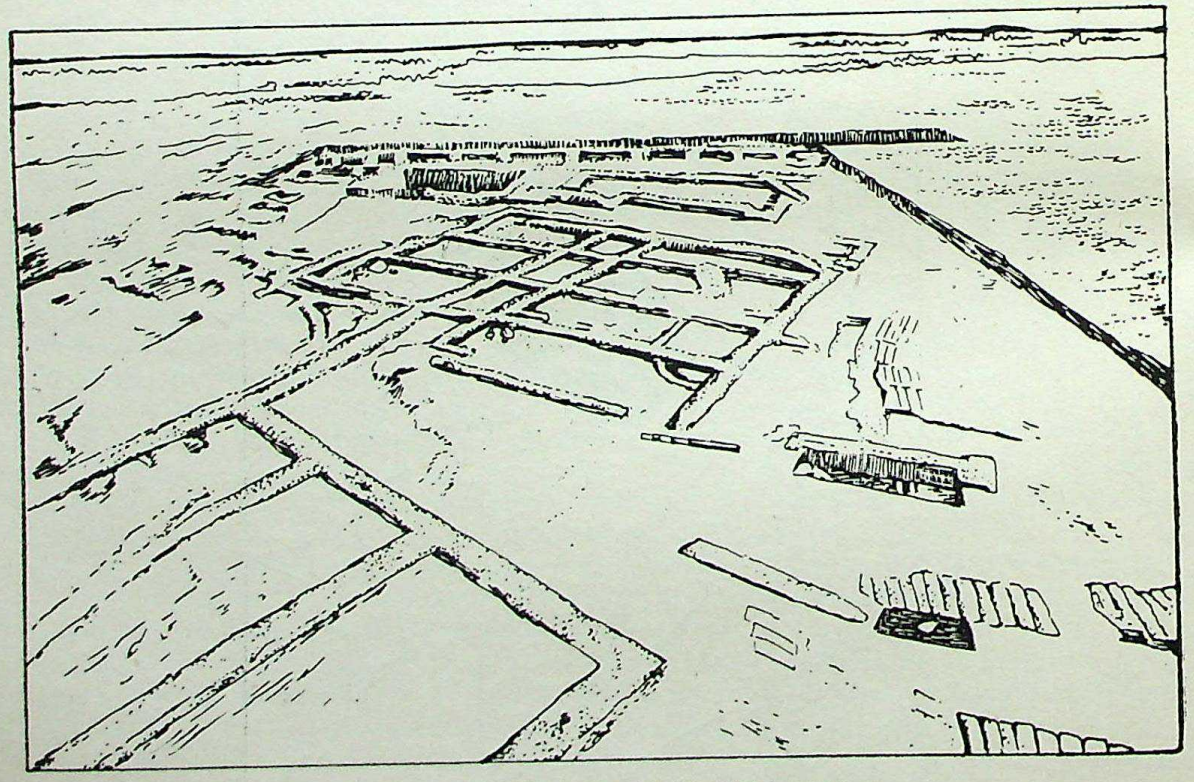

Fig. 2.6A. Mehargarh I, (Aceramic): Mud-brick structures.

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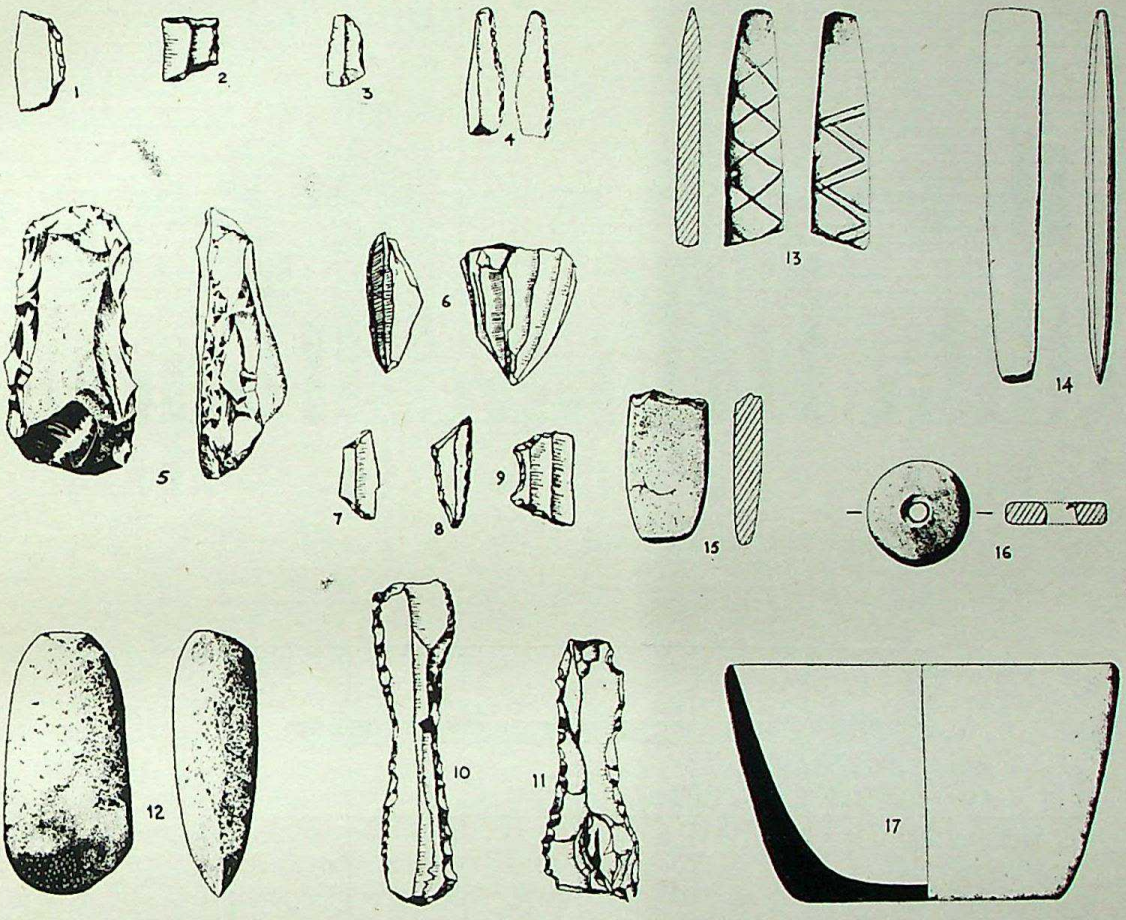
which had numerous human burials. Some of the structures were divided into small square compartments, apparently used for storage. Among the artefacts are grinding stones, small flint blades, bone tools, etc. The evidence of agriculture comes from the

*Fig. 2.7*




Painted pottery from MR. 3. Period I

Fig. 2.7. Mehargarh I (Aceramic): Lithic artefacts.

impressions of the following grains in mud debris—two-row hulled barley (*Hordeum distichum*), six-row barley (*H. vulgare and H.vulgare varnudum*), einkorn wheat (*Triticum monococcum*), emmer (*T. dicoccum*) and bread wheat (*T. durum or T. aestivum*). With these cereals, charred seeds of the plum-like jujube fruit (*Zizyphus jujuba*) and stone dates (*phoenix dactylifera*) have been uncovered, indicating that both these trees were used as food resources in Neolithic times. These are still grown in large numbers around Mehargarh even to this day.

As far as animal remains are concerned, there is two metre of Neolithic deposit at the top where a shift from faunal assemblage dominated by the bones of wild animals to the assemblage characterized almost exclusively by the bones of domesticated animals has been clearly brought to light. For example, the earlier assemblage contains the remains

*Fig. 2.8*

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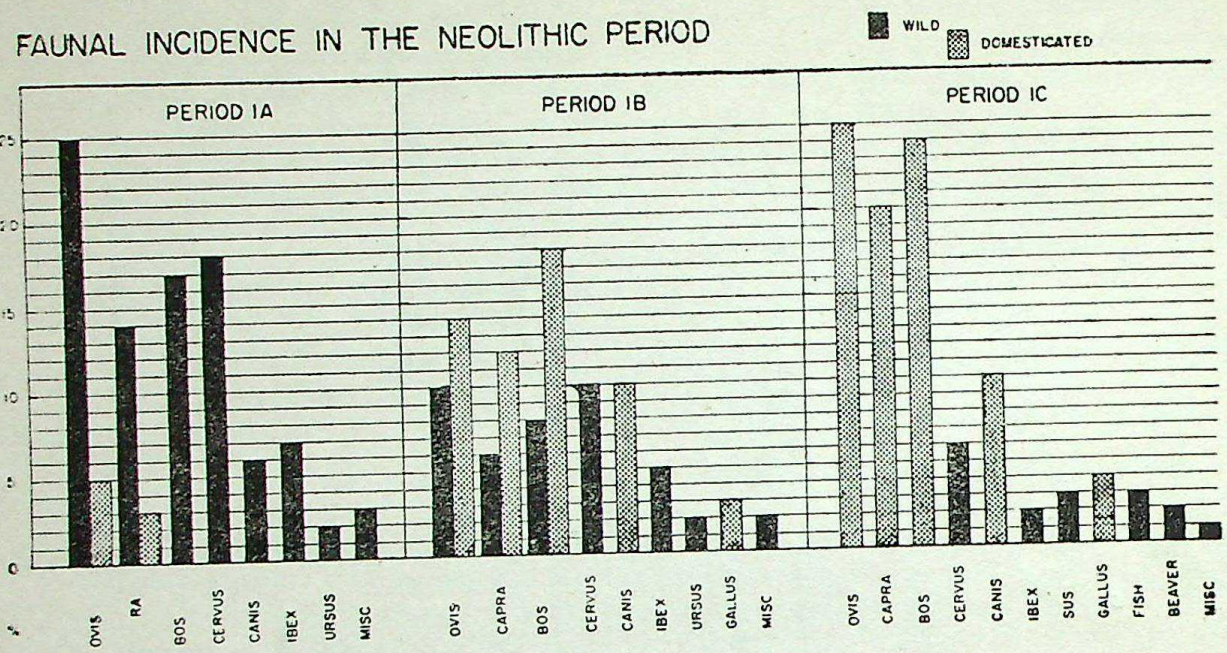
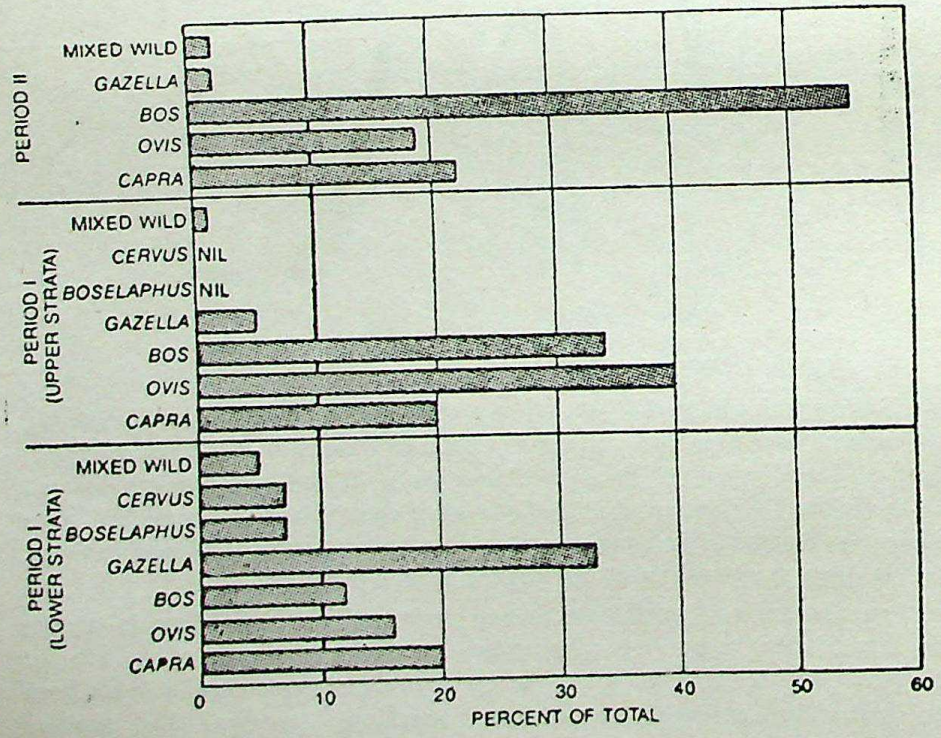



1. Transition from hunting to herding.




2. Faunal incidence in the neolithic period.

Fig. 2.8. Mehargarh I (Aceramic): Chart showing Transition from Hunting to Herding.

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of gazelles (*Gazella dorcas*), wild sheep (*Ovis orientalis*), wild goats (*Capra aegagrus*), swamp deer (*Cervus duvauceli*), large antelopes (*Boselaphus tragocamelus* and wild cattle (*Bos*, perhaps the species, *Namadicus*) than the remains of domesticated cattle (*Bos* perhaps the species *indicus*) and goates (*Capra hircus*). By the end of period I, except for a few remains of gazelles, wild pigs (*Sus scrofa*) and onagers (*Equus hemionus*), almost all other animal remains belong to the domesticated variety—cattle, goats and sheep (*Ovis aries*). Since wild species of these animals were present in this part of Baluchistan in the seventh millennium B.C. it would have been possible for the Baluchi Neolithic folk of Mehargarh to domesticate all these

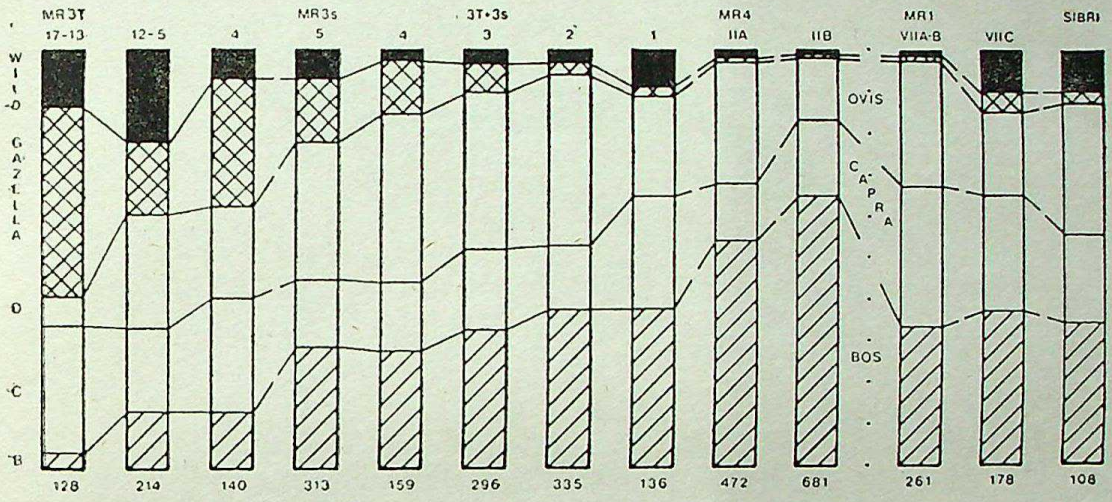


Fig. 2.8A. Composition of Faunal assemblages from Mehargarh I, II and VII, from Sibri.

three animals. At least, in the case of sheep there is good evidence that the process of domestication did take place locally. *Fig. 2.8A*

Grave goods included beads, necklaces, anklets, belts, etc. The beads were made of shell, bone, various local stones, imported lapis lazuli and turquoise as well as copper. *Fig. 2.9*

The flint industry of period I is also very interesting since more than 20,000 pieces of flint have been recovered so for. The tools are mainly blades, bladelets and microlith—trapezes, triangles, etc. Trapezes have been retouched so that the finished bladelets have a concave back and they are directly comparable to concave backed trapezes found in Western Central Asia. A fair number of bone tools have also been reported: most of them are awls. Heavy stone tools, like axes, adzes and celts, have equally been found. *Fig. 2.7* *Fig. 2.7*

The exceptional and most interesting finds of period I include five figurines made of unfired clay. Three of them represent human beings and two represent animals. Jarrige compares these human figurines with some figurines of west Iran. However, since he has not mentioned any specific site, the comparison remains at the generalized level.

These details make it clear that at least in the upper levels of Mehargarh I, a complex farming community was growing up where agriculture was practised, domestication was followed, semi-precious local and imported stones were worked and mud brick houses were built. Some sort of magico-religious practices were performed as evident from the finding of human and animal figurines and the traces of red ocher on them.

A few other features are worth noticing in the context of the pre-pottery neolithic

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horizon of this area : first the predominant mesolithic character of lithic artefacts and its long continuity till Mehargarh VII ; stone tools have never became secondary though they were limited in later periods. However, their mesolithic character indicates that the change from mesolithic to neolithic did take place locally. The occurrence of heavy stone tools in increasing numbers through successive periods also supports this change. Again, significantly the West Asian pre-pottery neolithic culture possessed obsidian tools—a feature totally absent at Mehargarh.

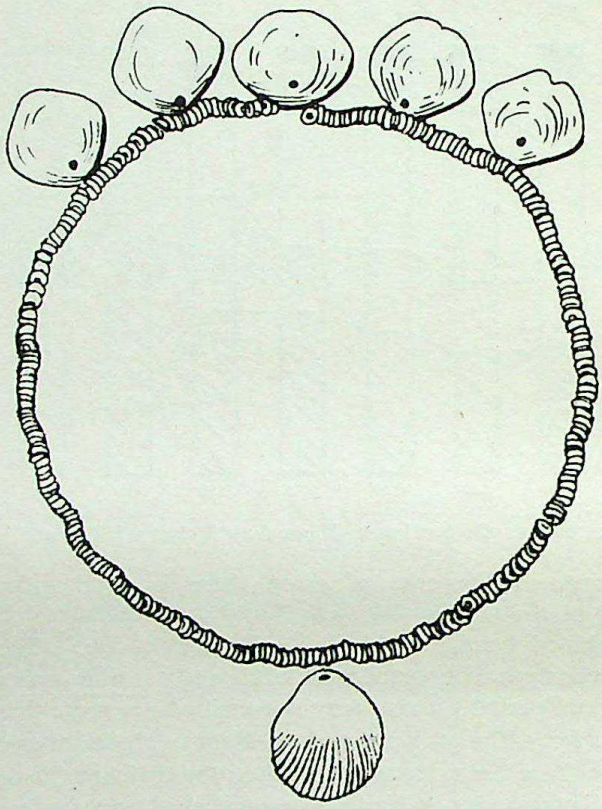

Fig. 2.9. Mehargarh I, (Aceramic): Seashell belt.

Secondly, the domestication of animals. As noted earlier, Mehargarh I witnessed a number of wild animals in the early levels being domesticated in later levels. If the earliest of the faunal assemblages consisting of some small and domesticated cattle (*Bos indicus*) could be dated to seventh-sixth millennium B.C., it would suggest that like West Asia here cattle husbandry began at Mehargarh an early date. Furthermore, Neolithic assembalges yielded a number of bones of water buffalo (*Bubalus bubalis*). They provide the earliest evidence of this animal at a village site anywhere in Asia outside of eastern China. Hence in Period I of Mehargarh one finds the similar pattern known in Western Asia : the hunters of a wide variety of wild animal could be seen changing themselves into the herds of a few selected domesticated animals. At Mehargarh, however, the pattern has a very significant variation : the most important domesticated animal was not the sheep and goat as in Western Asia but cattle. In

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a way this also reflects the local indigenous character of the domestication of animals. In other words, there was such a basic difference between Indian and West Asian pre-pottery neolithic that the former cannot be thought a derivative of the later.

A number of impressions of different cereals found in the mud of period—I attest the agricultural base of the society. However, at present we do not know if they were domesticated locally and independent of West Asia. We are not also aware of their wild varieties.

Mehargarh I also witnessed the use of some luxury items like beads of imported stones that brings this area within some sort of primitive interaction zone in which nomadic exchange and the long distance trade model is applicable ; lapis lazuli might have come from Afghanistan and turquoise from Iran or Central Asia through nomads. In other words, the pre-pottery Neolithic people did not spend their life in complete isolation.

Two facts are important to note here : first, the site shows evolutionary changes through time and secondly, there is no nearby pre-pottery neolithic site from which the origin of pre-pottery neolithic in this area could be derived. That the Mehargarhians of Period I came all the way from the Zagros and settled here in Baluchistan after crossing the Iranian Plateau is hard to believe. Mehargarh is, however, not the only site of this indigenous culture in Baluchistan; traces of it were detected at Kile Gul Mohammad (abbreviated KGM) and Gumla, as noted earlier. Had Fairservis excavated KGM. on large scale, he would have certainly got similar results.

The next stage of cultural development in Baluchistan is ceramic neolithic. At Mehargarh the area is called MR. 4 and the cultural deposite is dated to the second half of the sixth millennium B.C. and the first half of the fifth millennium B.C. The appearance of pottery is the hall-mark of this period. By this time we find that the Quetta Valley, the Zhob and Loralai valleys and the Kalat region were also inhabited. The neolithic remains, found at Rana Ghundai I, Sur Jungal I, Kile Gul Mohammad II, Mundigak I-1, Anjira I, Sarai Khola I, Jalilpur I, yielded almost the same type of cultural material. Fairservis (1956 : 349) explored five sites of this period in the Quetta Valley—Q. 17, Q. 24, Q. 25 and Q. 34. All of them have yielded handmade coarse wares in the lower levels and fine wheelmade painted pottery in later levels. Mehargarh IIA (lower level) is a pure ceramic phase and probably short lived too. It may represent the transitional phase from pre-pottery Neolithic to the Chalcolithic culture. It has yielded the remains of several rectangular structures that were sub-divided into narrow doorless compartments. In the filling of the compartments of one of the structures were found the imprints of wheat and barley and two sickles with flint blades. At least some of these might have served as storage for food stuff. Outside the walls of one of the structures were found several hundred charred seeds, including different varieties of wheat, barley and cotton. They have been found in a large burnt area. The discovery of cotton seeds at this very early stage is extremely significant as it provides solid ground for the Indus cotton. Thousands of bones, mainly of domesticated animals—sheep and goat, and also cattle which predominate have been reported. These animals might have been used not only for milk and meat but also for ploughing, threshing and as pack animals.

*Fig. 2.6*

*Fig. 2.5*

*Fig. 2.10*

*Fig. 2.11*
*Fig. 2.11A*

*Fig. 2.11B*

Like an advanced centre, the village of Mehargarh in this period has a separate workshop where beads of soapstones were worked. Drills, flakes, soft raw materials and beads in different manufacturing stages have been noticed. Flint tools and bone tools of the preceeding industries continued as they have been found in abundance.

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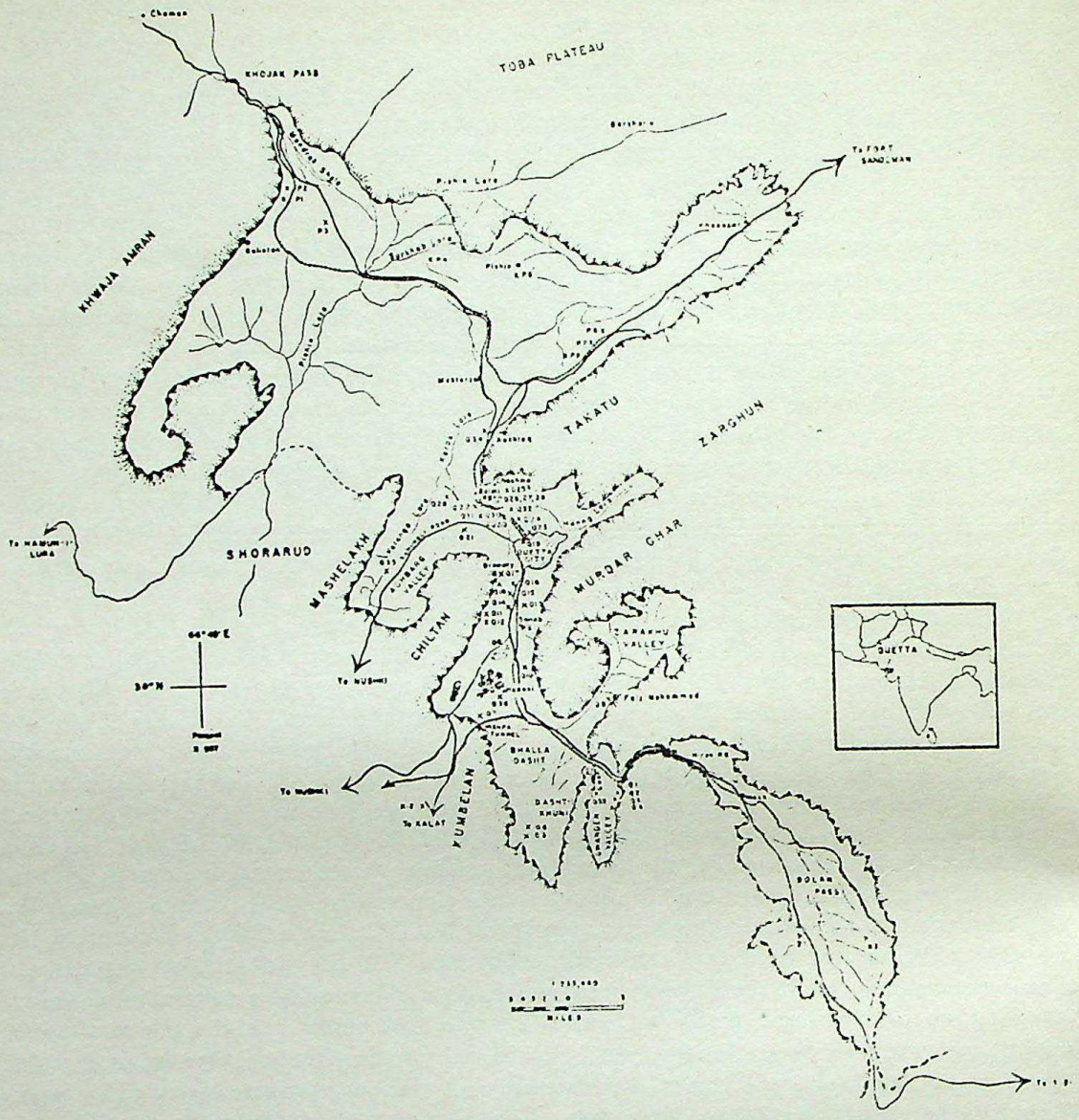


Fig. 2.10. Map showing Quetta region, Northern Baluchistan.

As noted earlier, pottery alone is the marked phenomenon in the gamut of moveable antiquities recovered from this period. In the lowest levels, along with a number of bone awls and needles, three atypical potsherds in a very fragile straw-tempered ware were found lying on a floor. This was the cultural stage in which pottery was still used on a limited scale. Above the filling of the rooms belonging to this early phase in M.R. 4, two skeletons in a highly flexed position were found lying in the eastern section of the trench. Above these skeletons, an enormous amount of potsherds is reported from the two metre of

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loose deposit. Half of them, made of straw and clay, are pots which appear to have been roughly shaped by finger pressure. The shapes are generally limited to a tronconical bowl of

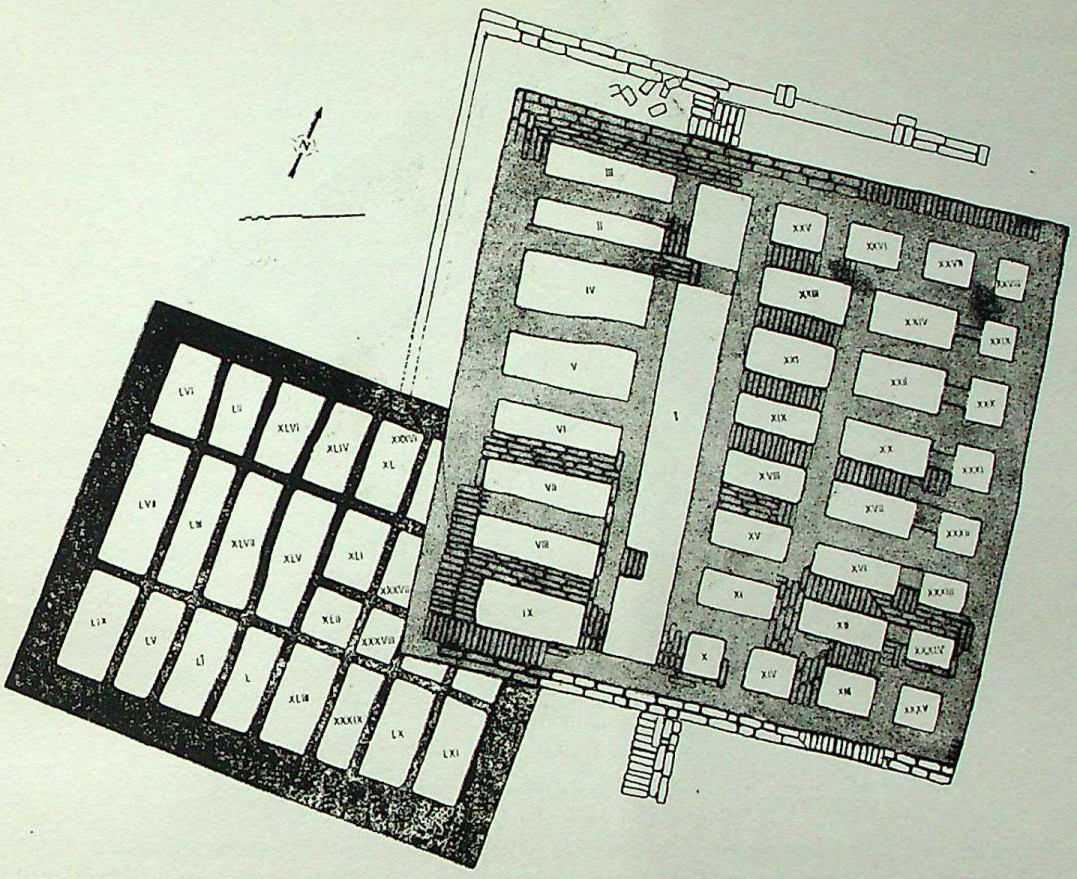

Fig. 2.11. Mehargarh II, (Ceramic Neolithic): Mud—brick structures.

various sizes and to a flat circular dish with grooved surface. This yellowish ware sherds are usually found in shapeless fragments of fragile nature. Of better quality though still handmade are a very small number of vessels with their lower parts moulded in basket. The remaining number of potsherds belong to a much finer wheel-turned ware. Significantly some open bowls and medium sized globular vessels with a collared rim in buff are often found painted with simple geometric motifs, such as criss-cross lines, big oblique lines, dots or hatched squares. Sometimes the decoration is bichrome, the motif being painted in black on a red band covering the upper part of the vessel. A few pots have been found treated with red slip. Terracotta bangles with painted linear decorations and several terracotta objects in the form of big nails have also been reported. *Fig. 2.12*

The wheel-turned painted pottery has been recovered from the upper levels. As noted earlier, similar pottery has been reported from Kile Gul Mohammad and Mundigak. On this basis the excavator (Jarrige & Lechevallier 1979 : 478-479) feels that, 'by the end of the 5th

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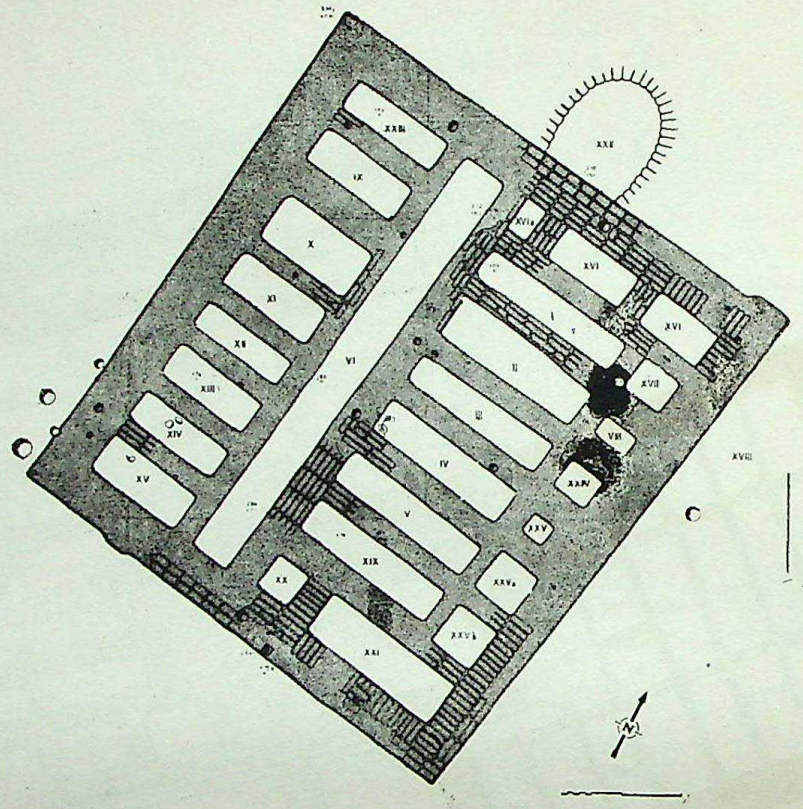

Fig. 2.11A. Mehargarh II (Ceramic Neolithic) Mud—brick Structures.

millennium and the beginning of the 4th millennium, the big communication axis connecting the Kachi plains, the Quetta plateau and the plain of Kandahar through the Bolan and the Khojak passes did correspond to a vast zone of cultural interaction.'

Fig. 2.11B. Sickle with flint blades (Mehargarh II).

The presence of several thousand wheel-turned painted potsherds in a very small trench indicates that by this time, Mehargarh had already achieved the position of an active ceramic production centre. The tradition of making human figurines, which continued during this period, also shows that this society was heading to increasing dimensions of cultural growth, including art and religion.

The above details clearly show that the lower level of Mehargarh II, representing ceramic

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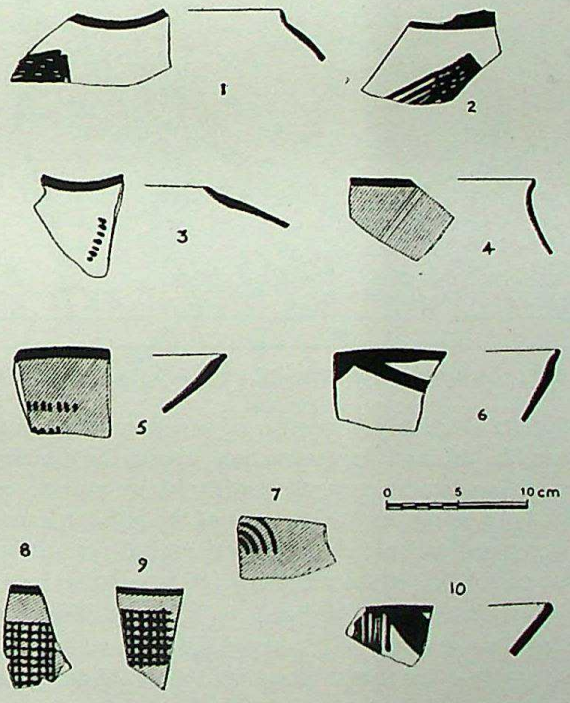
neolithic culture, had the potential for the chalcolithic which followed shortly. This period, it may be noted, witnessed complete continuity from Period I as stone and bone tools of the mesolithic character still occur. However, some new techniques and practices evolved : for example, the practice of making long blades, domestication of animals like sheep, goat and cattle, agricultural practices, including that of cotton seeds, modelling of terracotta figurines, etc. The evolution from the culture of the earlier phase is also seen in the disappearance of heavy tools such as axes, adzes; the appearance of handmade coarse wares; the slow wheel-turned ware with bichrome tradition ; and, in the upper levels, fine painted pottery in abundance.

Here a few points are worth notice : the animal bones are almost all of domesticated varieties and wheat and barely have been found in different varieties. However, the discovery of cotton shows technical growth of agricultural property and the prosperity of the site. Pottery in abundance makes the site a big ceramic centre which supplied pots and pans to neighbouring sites. Till recently, the polychrome, bichrome and wheel-made wares in Baluchistan were considered diffusionistic traits from West Asia as no site in Baluchistan had produced the evolutionary stages. Now one finds the wheel at an early date with bichrome pottery decorated with geometric motifs. There is now no need to connect Baluchi bichrome and polychrome wares with West Asian wares. However, other sites of this period have not yielded this rich material probably due to limited digging. There is nothing abrupt or alien at this site, which one can connect with the West. All technical growth is documented here in the time sequence.

The introduction of metal technology brought Baluchistan to the chalcolithic phase.




Painted pottery from MR. 4. Period II b

Fig. 2.12. Mehargarh II (Ceramic Neolithic): Painted Pottery.

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*Fig. 2.10* During this phase, a number of settlements emerged in the Quetta Valley as Fairservis (1956 : 350) has reported : Q. 4, Q. 6, Q. 14, Q. 17, Q. 18, Q. 19, Q. 23, Q. 24, Q. 25, Q. 29, Q. 30, Q. 32, Q. 33, Q. 35 & Q. 36 and Mehargarh in the Kachhi plain. Anjira and Siah Damb in Kalat region, Rana Ghundai, Moghul Ghundai, Periano Ghundai, Sur Jangal in Zhob and Loralai and Mundigak in Afghanistan. This phase can be dated to 4000 B.C. At Mehargarh the area is labelled MR 2 and the occupational deposit is 3 m thick. A number of compartmented structures somewhat larger and more elaborate than those of Period II have been unearthed. At one place the pottery types and the types of terracotta bangles, beads, etc., show their continuity from Period II ; some other areas at the site add a number of new

*Fig. 2.13*

*Fig. 2.14*

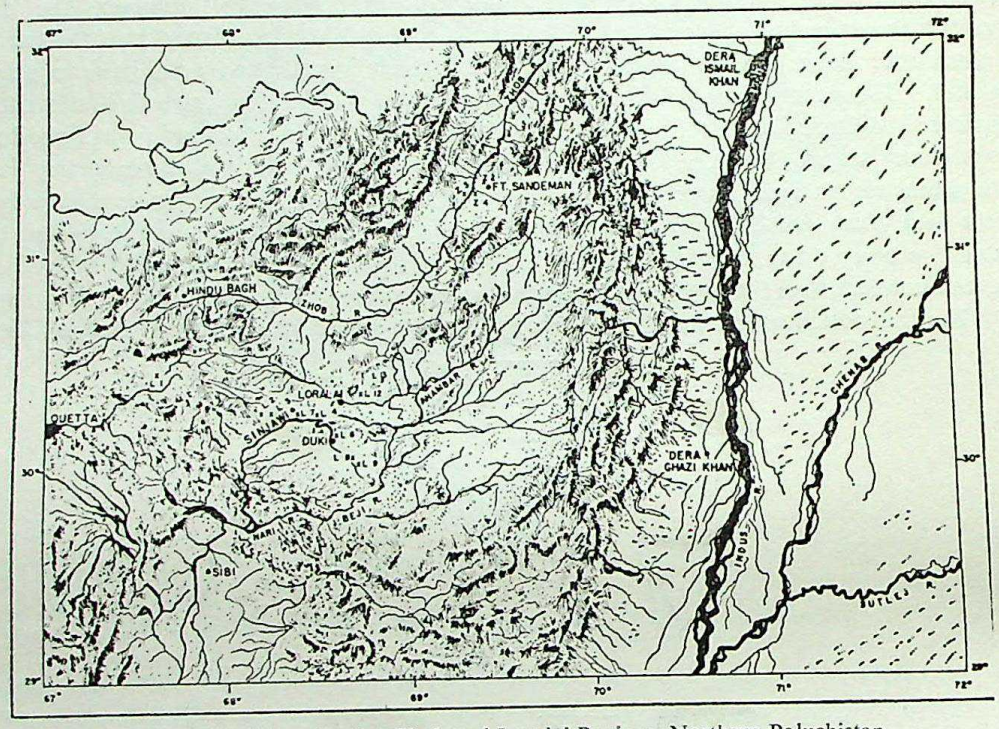


Fig. 2.13. Map showing Zhob and Loralai Regions, Northern Baluchistan.

features in the field of craft. Similarly, a number of new decorative motifs came into existence after period II; for example, animal representation occurs for the first time. Except for a very limited number of handmade pots, often with basket marks, all potsherds belong to wheel-turned examples. As many as 30 per cent of the potsherds are in coarse buff ware, including 40 per cent decorated with red slip. 10 per cent of the potsherds are painted either on a red background or on a buff surface with rows of processing caprids or birds in registers of geometric motifs. Caprids are also painted in diamond-shaped panels or between the branches of extended maltese crosses. 'W' shaped designs, which originally must have been stylized flying birds, are very often found associated with animal motifs. Among geometric designs, there are dot-tipped motifs, rosettes, hatched or plain triangles or butterfly patterns. Chequerboard patterns can be commonly seen. Besides these new motifs, bowls with their rims decorated with suspended vertical lines or with suspended festoons are identical in form, fabric and painting to specimens belonging to Period II.

*Fig. 2.15*

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Most of these motifs have parallels in other parts of Baluchistan, for emample, the dot-tipped motifs have been noticed at KGM III (Fairservis 1956 : 272-273). The animal designs *Fig. 2.16*

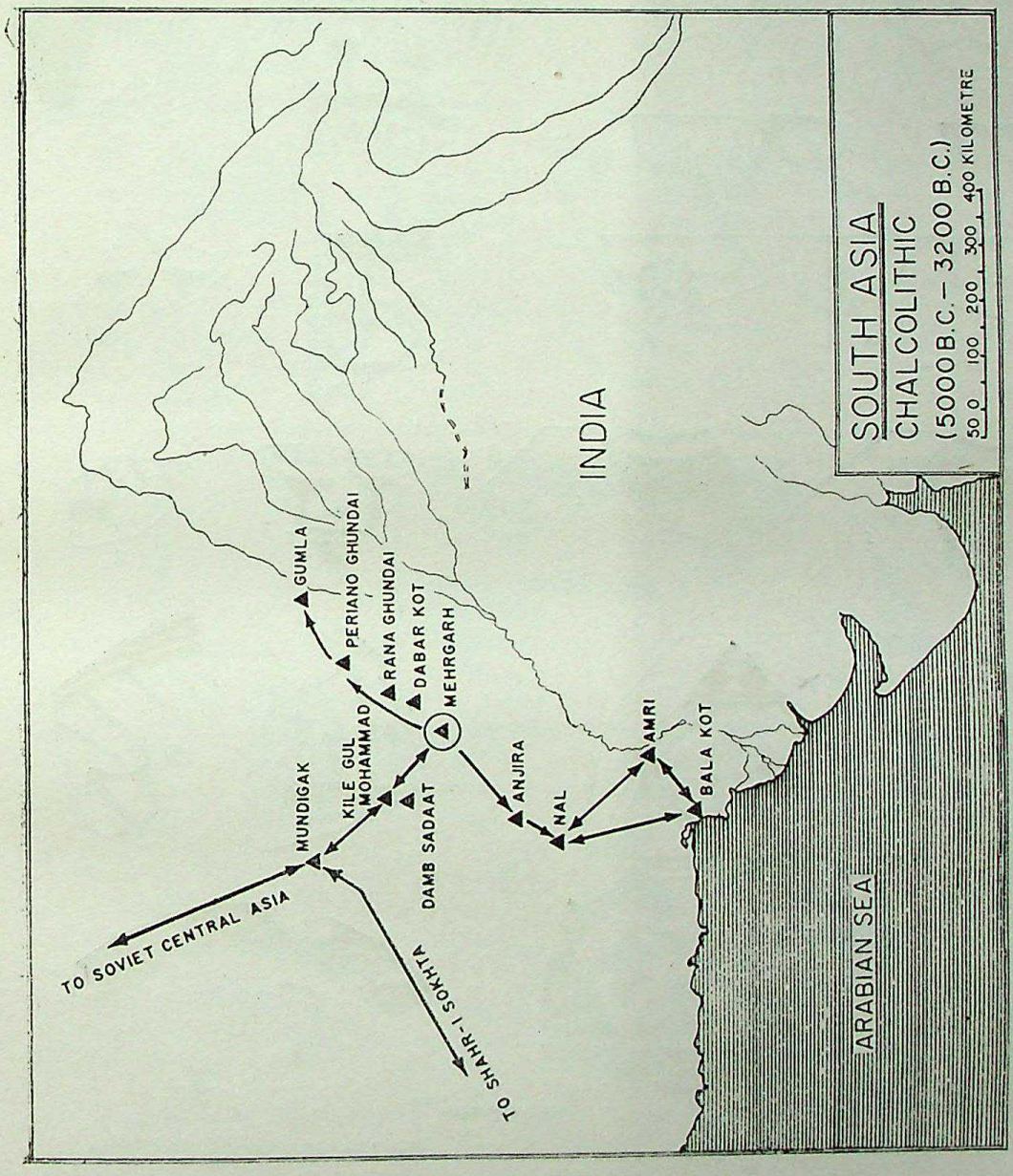


Fig. 2.14. Map of South Asia showing Chalcolithic sites.

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can be related, to some extent, to the Togau style. Also, it is most probable that if Kile Gul Mohammad was excavated on a large scale, there is every possibility of the caprid motif being found here. The Kile Gul Mohammad black-on-red slip is common to the Quetta Valley, the Zhob and Loralai valleys, the Kalat region and southern Afghanistan in this phase. In the

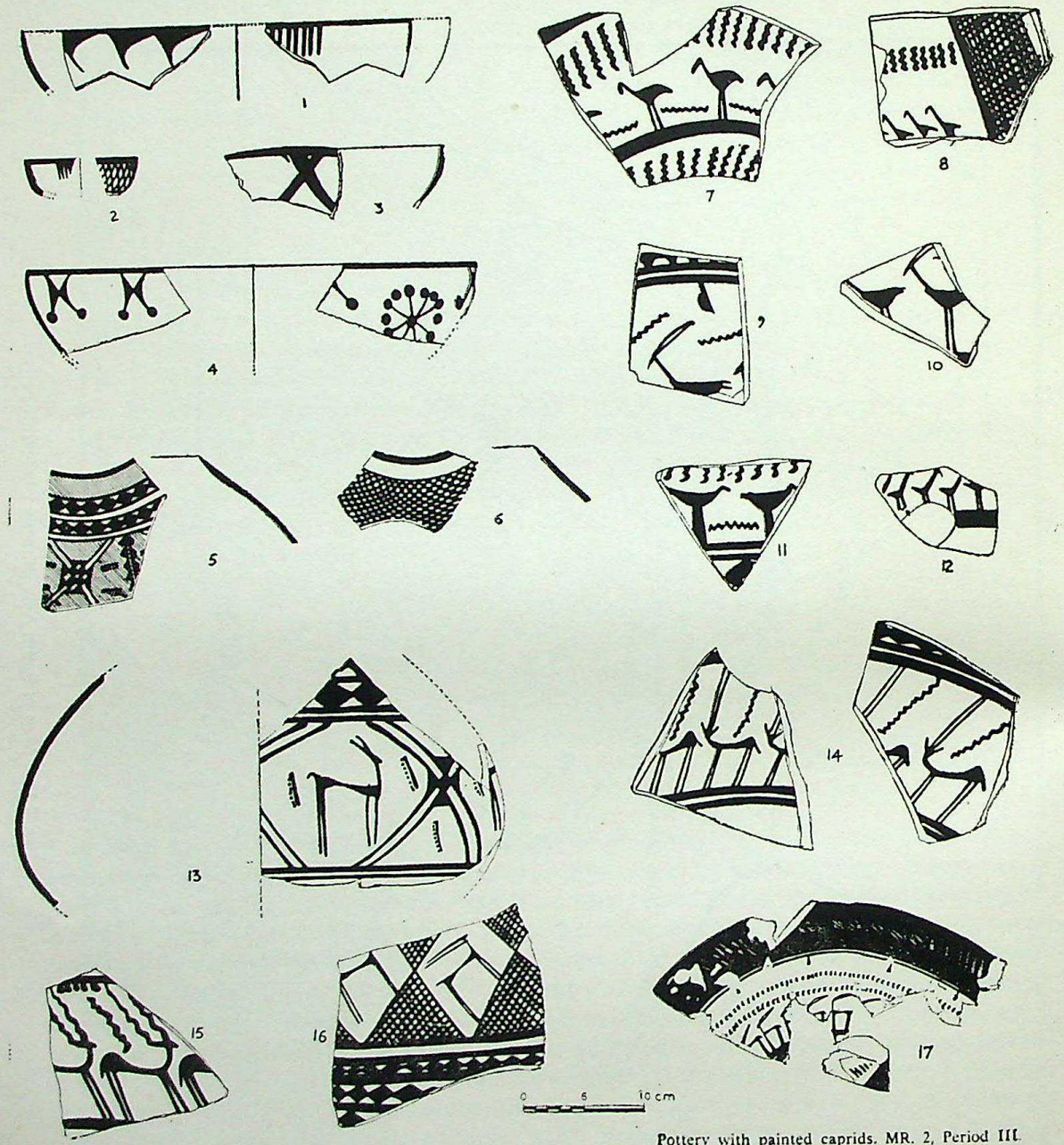


Fig. 2.15. Mehargarh III (Early Chalcolithic): Pottery with painted caprids.

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Zhob and Loralai valleys, the zoomorphic motifs belong to the same ceramic tradition though there we see the development of a strong original style in the precursors of the humped bulls. The Wet Ware, in its initial stage, also appeared in this phase. *Fig. 2.17*

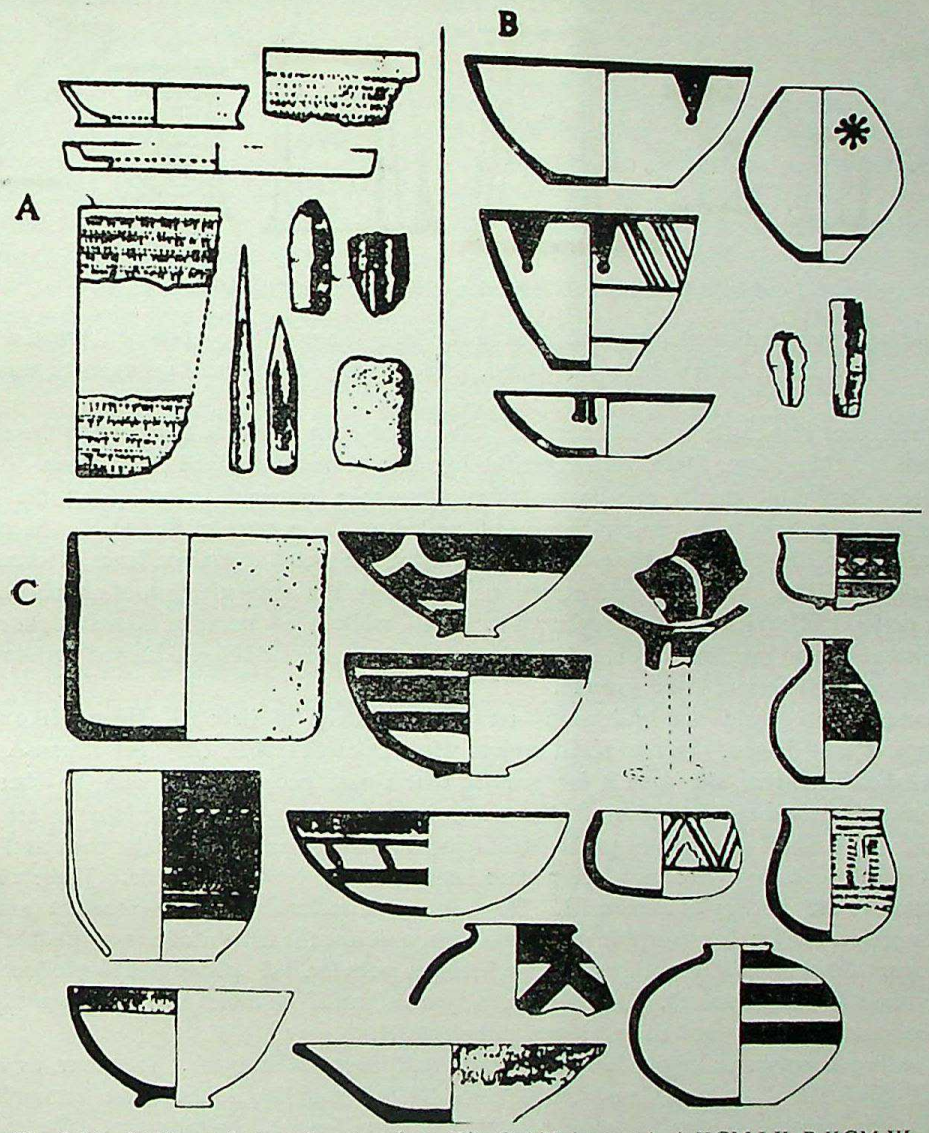


Fig. 2.16. Lithic artefacts and pottery from Kile Gul Mohammad. A-KGM I-II; B-KGM III C-KGM IV-Damb Sadaat I.

Other arts and crafts traditions continued in the field of modelling figurines (the terracotta humped bull) and bead-making. Lapis Lazuli, turquoise and carnelian, cylindrical bits made of green jasper found at Mehargarh III, are the earliest specimens of a type that was used at Shahr-i Sokhta, Shahdad and Chanhudaro, all later than Mehargarh III. Regarding the

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metallurgy we have solid proof—fragments of several crucibles that had been used to melt copper; traces of the metal still adhere to them.

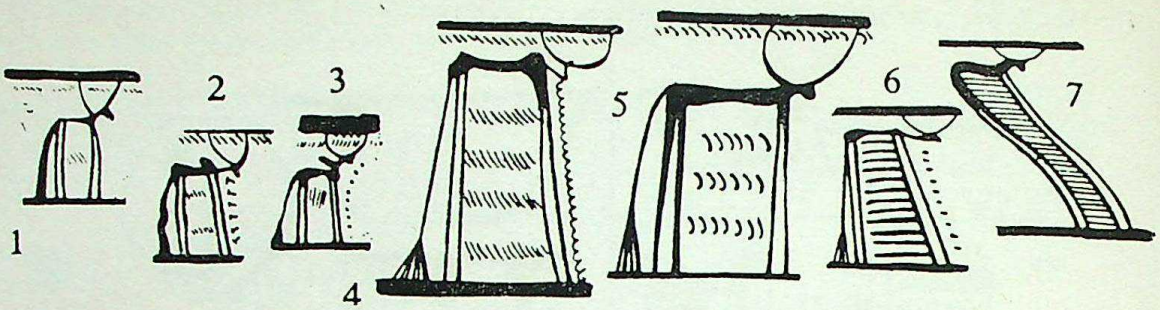


Fig. 2.17. Stages of Stylization of Bull motif at Loralai sites.

Another important development occured in the field of agriculture—two new bread wheats and a new species of barley were cultivated. An entirely new cereal genus, oats, was also grown.

Sheep, goat and cattle were still herded. Lithic and bone artefacts belonged to the earlier traditions. At this stage, Mehargarh expended in size. It now inhabited 50 hectares.

A few important points are drawn from the above documentation. First, the mass production of pottery with various new motifs added to the pottery of Period II. Secondly, the continuity of the lithic and bone tradition. Thirdly, the metallurgical evidence of crucibles, the working of lapis, turquoise and carnelian ; and lastly the domestication of animals of the earlier period and agricultural diversification. Thus, while a few items of factual data reflect the continuity from previous times, a few other show that new addition occurred perhaps as a result of technical research and growth.

Pottery with caprid and bird motifs recall the pottery of Sialk III, Hissar IB and IC, Namazga II and Togau. In the Kalat region when Decardi (1965 : 126) got Togau A ware with handmade pottery, she took it for granted that a new people, along with the wheel and these motifs, arrived in Baluchistan. However, in the present perspective things are a bit different. The wheel was known to the Mehargarhians for a long time, as far back as Period II, and since then, they were producing wheel made pottery on a large scale. These caprids are related to the pottery of Period III. They indicated technological development and the potter's preference for zoomorphic representations, and not the arrival of a new people from alien area. Sometimes if a motif or a shape becomes popular, the potter has to produce it on a mass scale to meet demand. Even today, a type of motif becomes the rage, and then, in time, becomes obsolete—and something new replaces it.

The Togau potsherds might have been imported from Mehargarh. However, as Hissar IB—IC, Sialk III, Namazga II and Mehargarh III fall roughly in the same chronological horizon, one is always tempted to see a possible diffusion from a central place. The caprid's representation in different cultural zones are so well known in Baluchi-Indus pottery that it is hard to believe it was imported from Iran. By and large, potters apparently used local fauna for these zoomorphic representations and, possibly due to that, motifs were sustained in different cultural zones, at different times with different characteristics.

Technological inventions, appear in time, at advanced centres like Mehargarh. The Wet Ware is one of them. However, the original bichrome painted potsherds and a large number

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of finger-impressed potsherds in Wet Ware relate it to Period II. The first metallurgical evidence in the area has been found at Mehargarh at an early date. The working for lapis, carnelian and turquoise also shows that Mehargarh was an important centre for technological innovations. The jasper drills emerged here for the first time and, later on, found their way to Shahr-i Sokhta, Shahdad and the Indus Valley sites. The mesolithic type of lithic artefacts were still in full use.

The whole character of chalcolithic Mehargarh thus reflects not only the newly achieved prosperity but also continuity from period II. The discovery of lapis lazuli and turquoise connects it with the outside world. However, connections with West Asia, presumed on the basis of the caprid representations, are extremely doubtful.

Slowly and gradually, Baluchistan entered in the advanced chalcolithic phase evidenced at a number of sites in southern Afghanistan, the Quetta Valley, the Zhob and Loralai valleys, and the Kalat region. In the Quetta region, Fairservis (1956 : 350) reported eighteen sites out of which Kile Gul Mohammad, Kechi Beg, Damb Sadaat and Karez are important for our present study. The Zhob and Loralai sequence is documented at Rana Ghundai, Sur Jangal and Moghul Ghundai. The Kalat region witnessed this phase at Anjira and Siah Damb and southern Afghanistan in the later levels of Mundigak. Out of all these sites, Mehargarh IV has documented all that is only partially represented in other sites; the area is designated MR I and the phase is assigned a date of 3500 B.C. Here the excavations exposed some sturdy mud-brick houses containing large storage jars. This period also shows the mass production of pottery, mainly of the fine wheel made variety. In the plain ware are very fine goblets of a greenish buff ware (used in later periods also), medium-sized carinated jars in Wet Ware and heavy basins internally decorated with three or four parallel ridges sometimes representing a snake-head. These basins were also used in succeeding periods. This type of vessel was known in Iran and Baluchistan but this decoration is usually done on the external surface. Tepe yahya IV C assemblage (personal examination) (later context) and Anjira Ware (DeCardi 1965 : 166-168) include similar examples.

Three types of painted pottery were prevalent during this phase : Monochrome with geometric motifs painted in black; bichrome with geometric motifs painted in two colours; and polychrome with geometric motifs in red, black and white. Painted motifs included Togau B and Togau C and the Kechi Beg style. Here we see geometricization of the animal motif. *Fig. 2.18* Caprids of Period III pottery slowly and gradually turned into zig-zags and large open bowls are decorated with registers showing the loop-and-tassel motif (Togau B) and horned friezes (Togau C). This motif diffused all over Baluchistan and Afghanistan (Casal 1961 : fig. 51.32). In Sind, too, Amri IA, (Casal 1964 : fig. 39) Togau C pottery has been found.

Kechi Beg pottery with geometrical motifs also had wide distribution in northern Baluchistan and southern Afghanistan. Big open bowls, in a sturdy well baked ware, are painted inside with geometrical motifs in brown or plum, filled with red or white on a pink or creamy surface. The Zhob and Loralai valleys were flooded with Kechi Beg pottery for which Fairservis has used the term 'Jangal coarse painted Ware'. Kechi Beg ware has been found at Mundigak II and in the Quetta region at the sites of Damb Sadaat I, Kile Gul Mohammad IV, Karez and Kechi Beg. This ware reached the Kalat region also and appeared at Anjira and Siah Damb. It, thus, appears that all northern Baluchistan was linked with close internal contacts. There is, of course, always the possibility that Baluchistan had a few ceramic centres which traded the pottery throughout the region.

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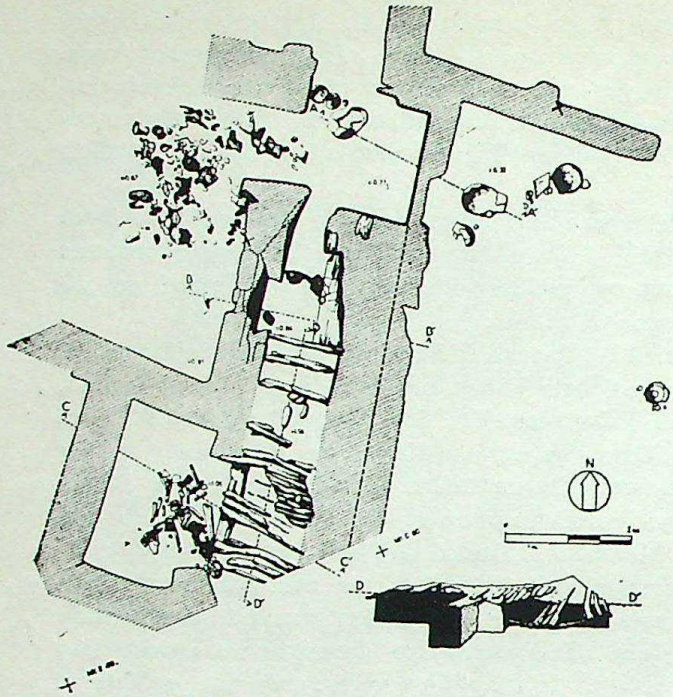

Plan of architectural remains on the Main Mound. Period IV.

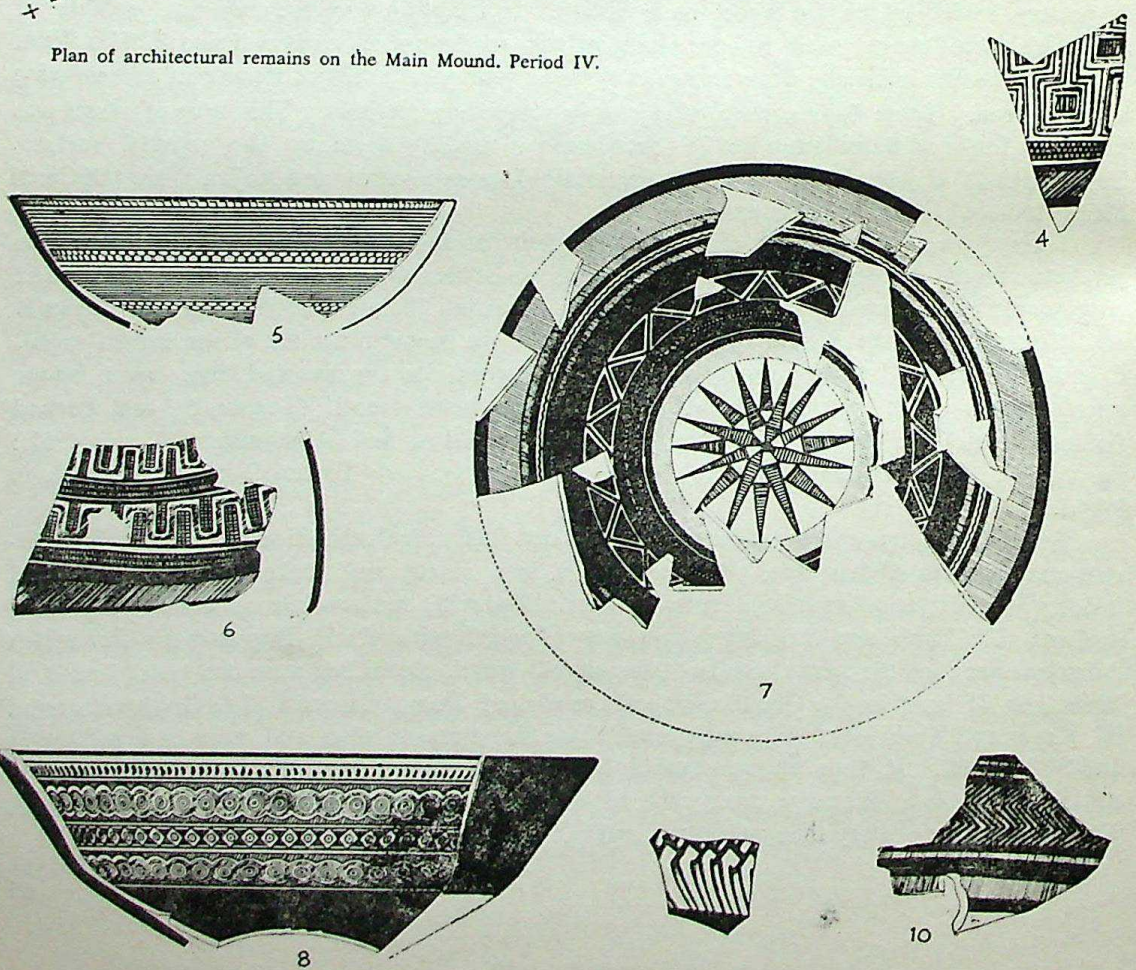

Fig. 2.18. Mehargarh IV (Advanced Chalcolithic) Mud-brick structures and painted pottery

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However, the earlier traditions still continued. Terracotta human figurines were still modelled, and their neolithic feature was still dominant. In the same way, lithic artefacts still maintained their mesolithic character. Bone spatulas increased in number but terracotta bangles were still popular. For the first time, stamp seals, made of terracotta and bone, were introduced within the framework of a new perspective.

The mass production of various types of pottery-monochrome, bichrome and polychrome, a big range of motifs and their wide distribution amongst northern Baluchi sites and the developed Wet Ware-attested the existence of a few advanced ceramic centres in Baluchistan which met the major demands of various new tastes. Earlier archaeologists thought that these polychrome and bichrome traditions were the diffusionary traits of Jemdet Nasr pottery. Now it has been proved that both of these occurred in Baluchistan in a much earlier context. Bichrome has been seen in its initial stages in Period II and in its full form in Period IV. These wares are indigenous to this area and are the outcome of developed technological and aesthetic advances. Possibly, these advanced ceramic centres produced various types of pottery at a time to capture public taste. The Kechi Beg pottery also found its way to Shahr-i Sokhta (Biscione 1974 : 134, 138).

Terracotta figurines of a neolithic character—a seated figure with joint legs with a tapering end, a tubular head with a pinched nose and no arms but pendulous breasts—were earlier considered Turkmenian and were thought in terms of import. But this type is seen at Mehargarh right from neolithic times and this, therefore, rules out the possibility of its being foreign in character.

The most important characteristic, as said earlier, of this phase is the finding of terracotta and bone stamp seals. So far it was believed that the seals appeared with the Quetta Ware of Turkmenian origin. But their discovery in an earlier context in Baluchistan now forces us to reconsider the origin of these seals. They are also indigenous. However, the excavator has not discussed them in detail. The appearance of the seals is significant although, admittedly, their real purpose, at this early stage, is still not very clear to us.

The next stage in the history of Baluchistan is when all northern Baluchistan was in close cultural interaction with Turkmenia for a long time. This is documented as the 'Quetta Ware' of the Geoksyurian (Namazga III) style. However, between Kechi Beg Ware and Quetta Ware there is a transitional phase which witnessed the change from polychrome to monochrome, from geometrical designs to vegetal motifs, and also the emergence of Grey Ware. This phase is not apparently, widely represented though one can see it clearly at Mehargarh V, where Kechi Beg Polychrome was limited and was dying out, bichrome changed into monochrome, and motifs like prototype of the pipal leaf, Togau D motif, fish, etc. emerged. For the first time, Grey Ware was noticed here in its primitive stage. The whole cultural assemblage reflects its indigenous nature. *Fig. 2.19* *Fig. 2.20*

And then Baluchistan entered an important epoch around 3200 B.C. This corresponds to DS II, RG III, SJ III, Mehargarh VI, Anjira III-IV etc. Fairservis (1956 : 350) records the maximum occupation of the Quetta Valley at this time. Mundigak III and Mehargarh VI gained remarkable prosperity. Further west, Shahr-i Sokhta was established at this time. The area stretching from Turkmenia to Baluchistan shared cultural traits as evidenced by Quetta Ware, flint-leaf shaped arrowheads, compartmented seals in terracotta and chlorite and double spiral-headed copper and bronze pins. Earlier, the female figurine also formed a part of this list, but their discovery at Mehargarh completely rules out their *Fig. 2.19*

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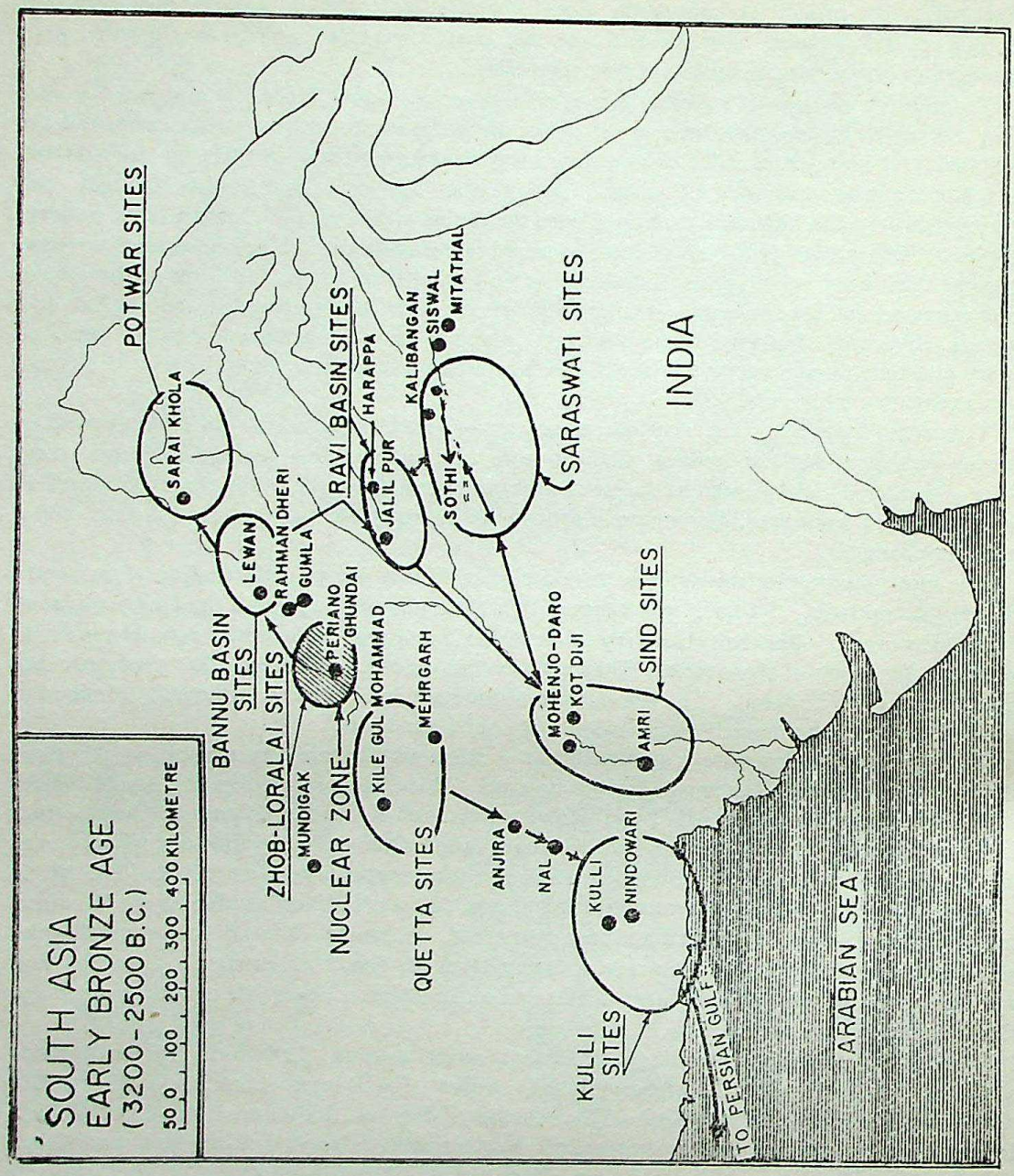


Fig. 2.19. Map of South Asia showing Early Bronze Age sites.

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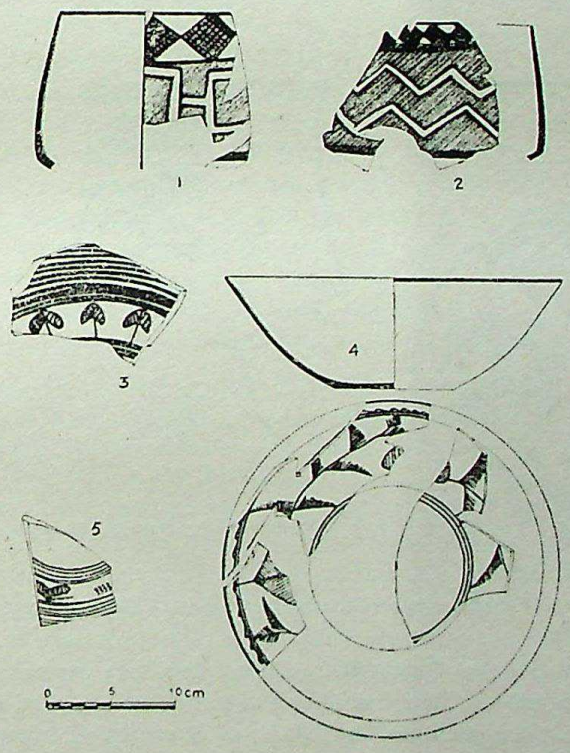
supposed Turkmenian origin. However, there are other definite evidences of Turkmenian diffusion in Siestan and Baluchistan. Whether Turkmenian cultural traits infiltrated Baluchistan by migratory or economic interaction means is, however, yet to be worked out. In any case, the abandonment of the Tedjen delta in Turkmenia, and the flowering of Shahr-i Sokhta in Siestan, at the same time, support the theory of migration.

Due to certain unknown reasons—possibly a natural calamity—the Turkmenians left the Tedjen delta and moved into Siestan and reached Shahr-i Sokhta as the presence of the Geoksyurian pottery shows. The second wave of Turkmenians followed a different route, through Mundigak to the Quetta Valley and spread all over northern Baluchistan. Some of them merged with the local people as one sees at Mehargarh where Turkmenian influence is very nominal or where these Turkmenian traits are thoroughly localized. However, at a few sites there Turkmenian traits overshadowed the local traits as the material culture of DS II shows.

Mehargarh VI also received Turkmenian impulses, but in a limited fashion. The existence of lapis and turquoise may not be connected with Turkmenia as they existed at the site from the very beginning. Mehargarh VI & VII both witness extensive firing activities, a number of kilns along with pots stacked for firing in a local style have been uncovered. Along with the Quetta motifs on Buff Ware, most of the ceramics produced are indigenous and evolved out of earlier pottery.

In the first half of Period VI, almost 50 per cent of painted pottery correspond to a red




Painted pottery from the Main Mound, Period V

Fig. 2.20. Mehargarh V (Transitional phase from chalcolithic to Bronze Age): Painted pottery.

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ware decorated with pipal leaves and associated motifs. So the tendency for more naturalistic representations noticed during period V was continued as has been confirmed by the discovery *Fig. 2.20* of a large number of such vessels. Palms are painted on buff pots. The potter's are again turned to faunal design. Pottery with geometric motifs painted in black and white on red are still found in good number in the beginning of Period VI but afterwards they disappear slowly and gradually. Meanwhile, Grey Ware became very popular. Decorated in black the paintings were sometimes executed in red also. Vegetal designs and palms are *Fig. 2.21* common. Animal representations—the humped bull with birds—recall Kulli style.

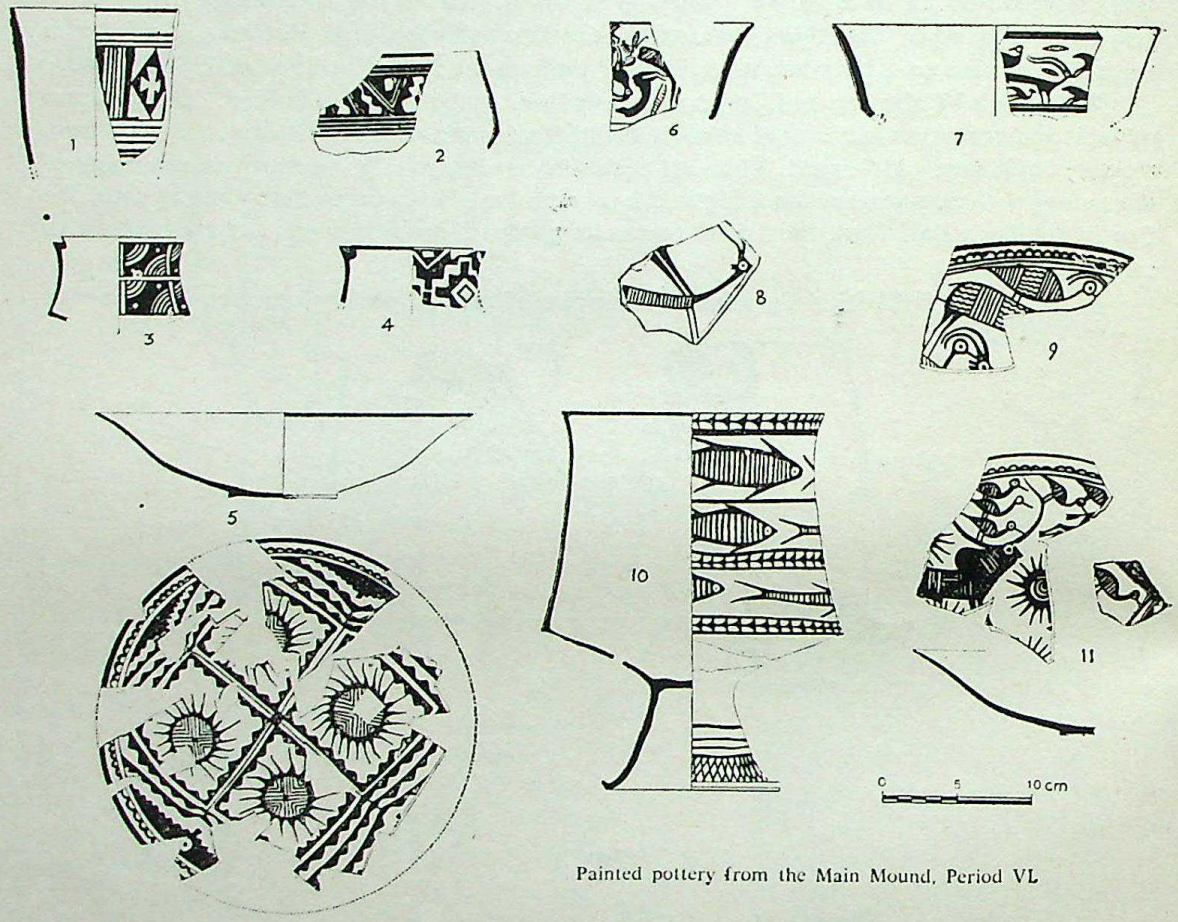


Fig. 2.21. Mehargarh VI (Early Bronze Age): Painted pottery.

The point at issue here is that Quetta Ware did not dominate ceramic production. Quetta motifs diffused into the art of Mehargarhians and were thus exploited by them on a larger scale. This clearly attests the quality of the culture of that region. Small centres, however, like Damb Sadaat, were overwhelmed by Turkmenian influence.

During this phase, another indigenous group of pottery, Nal Polychrome, is seen. As the

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potsherds are limited in number, we can reasonably consider them imports from southern Baluchistan.

This period witnessed considerable progress in the mass production of female figurines. A new type of female figurine with circular eyes, a fantastic headdress with two huge coils of hair flanking the head, multiple strand necklaces covering pendulous breasts in these figurines show a tendency to greater naturalism since the older figurines were armless. However, they are still in a seated position with tied legs. This figurine is the outcome of a well established local tradition. So far, no parallel to these figurines is traceable, not even in Baluchistan itself. A few terracotta bulls also attest the continuance of the original style.

The use of metal is known at the site though the salt in the soil has destroyed the copper/bronze objects. However, many shapeless fragments have been found, besides one chisel and one flat axe. The lithic industry and bone industry remained unchanged. Remains of wheat, barley and oats have been found along with milling stones. Sickles are unchanged. A new addition to the agricultural inventary is the wine grape which gave them sufficient sugar.

Two points are to be gleaned from the above : first, the mass production of pottery where several local wares along with Quetta Ware produced. Quetta Ware was not dominant here. The Faiz Mohammad Grey Ware, indigenous to this area, was becoming popular than Quetta Ware. Secondly, the earlier traditions of making figurines, lithic and bone artefacts, and bead-making continued. The alien impact did not last long. It could not intervene in the indigenous culture traits. Jarrige (1979:532) considers the Turkmenian influence marginal and the result of limited commercial intercourse.

The last stage through which Baluchistan passed in this sequence—before the Harappan stage—started round about 2900-2800 B.C. Somehow, during this period most of these sites in northern Baluchistan started declining, in fact they were deserted soon afterwards. In the Quetta Valley, the sites, now numbered only ten (Fairservis 1956:350). The phase is represented in the Zhob-Loralai valleys, the Kalat region and southern Afghanistan, Rana Ghundai IIIC, Periano Ghundai upper strata, Anjira IV, Mundigak IV and Mehargarh VII. Why the sites were deserted afterwards, we do not know. Could this be due to the emergence of Pre-Harappan towns or Harappan cities in the Greater Indus Valley ? *Fig. 2.19.*

During this period, monumental structures were built at sites like Mehargarh VII, D.S. III, and Mundigak IV. Sadaat Ware in the late Quetta style and the Faiz Mohammad Grey Ware became common. A large pottery production area marked with a number of kilns has been brought to light at Mehargarh in Period VII. The mass production of pottery is evident here. The Wet Ware and Faiz Mohammad Grey Ware with Quetta motifs in more linear fashions had been used here all over. Faiz Mohammad Grey Ware has a variety of indigenous local motifs on the open bowls—fishes, among acquatic plants, animals with pipal leaves background or cherry like motifs. The Ware was very common in Baluchistan and was exported to southern Afghanistan, Siestan, Iran, etc. This period corresponds to the mass production of plain standardized pots, fine tulip shaped goblets, brandy glasses, piles of plates, forming sets of different sizes. Sets of tulip shaped goblets, carinated bowls and flattened globular pots in buff ware are decorated with a later variety of Quetta geometrical motifs painted in brown or in plum or pinkish Buff surfaces. This is known as the Sadaat III style, a term given by Fairservis (1956 : 265). Two carinated bowls on tall stems in grey ware are certainly not local products and possibly imported from Iran-Tepe Hissar II B. *Fig. 2.22*

The most amazing feature of this period is the discovery of a large number of fragments

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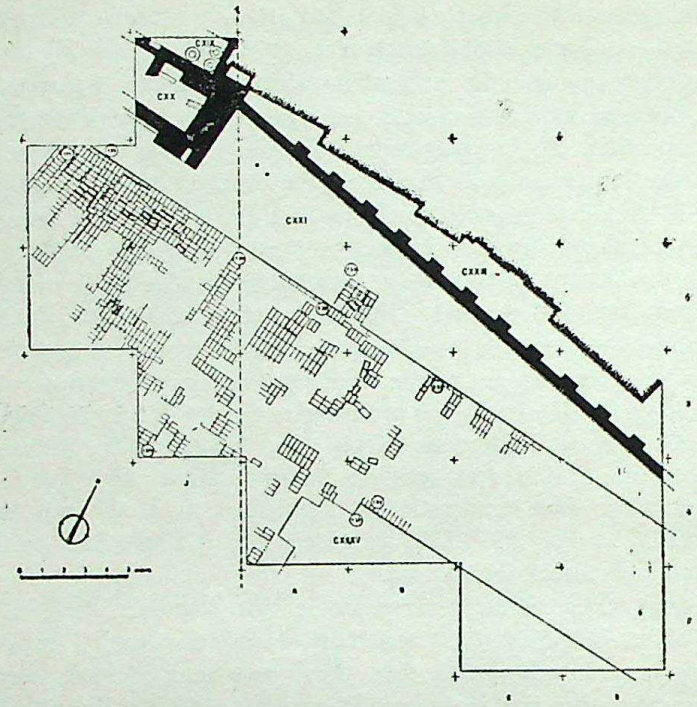
of female terracotta figurines commonly known as 'Zhob-Mother Goddess'. From lower levels to upper levels the process of their production is documented here. Mehargarh has



**Plan of the monumental platform. Main Mound, Period VII**

Fig. 2.22. Mehargarh VII (Advanced Bronze Age): Monumental structures.

yielded their fragments in thousands and that makes it clear that the site was not only a ceramic centre but side by side it manufactured terracotta figurines also. Probably Zhob Mother goddesses were supplied to Zhob and Loralai valleys, Mundigak, Quetta region and the Kalat region from this centre. No site, except Mehargarh, has ever yielded the evidence for the production of these figurines. This period also witnessed the male figurines which are unique and account for 30 per cent of the human representations in terracotta. Mundigak (Casal 1961 : Pl. XLI 8-9) imported male as well as female figurines. Another type of figurine unique in shape is also worthnotice : two heads are remarkable by their baldness their deeply incised semi-circular eye-brows and slit eyes. No real parallel for these figurines has been located so far. Animal terracotta figurines have also been found at Mehargarh but in fewer numbers than they are in Mundigak and Shahr-i Sokhta. However, their modelling is far superior. They include very elegant humped bulls, birds, etc. A few fragments of alabaster vessel have also been reported, compartmented stamp seals, lithic artefacts, copper/bronze objects, chisels, flat blades and axe, a complete bronze/copper pin with two spirals are also noticed here.

For this phase two to three factors are important : the production of Faiz Mohammad Grey Ware, its popularity and distribution. Secondly, the transformation of the Quetta style

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motifs in the Sadaat III style, the prodution of the Zhob Mother Goddess in large numbers and the other various industries. All maintained their basic indigenous character. After this period, Mehargarh was deserted and the people known as the Harappans are found settled at Nowsharo, nearby site. A few things may be remembered in this context. The Kot Dijian pottery was found at Periano Ghundai in levels earlier than the level containing the Zhob Mother Goddess. The Zhob and Loralai Valleys and the Quetta Valley also possessed the pottery assemblage similar to the Kot Dijian at an early date as at Damb Sadaat period II. However, Mehargarh yielded Kot Dijian pottery only in period VII in the uppermost level and along with the Zhob Mother Goddess. Terracotta cakes also appeared in the same level. This clearly show that regional variations in northern Baluchistan cultures were always present and it is a natural phenomenon in a country like India.

The problem with Baluchistan archaeology lies mainly in the nature of trenches laid and the limited diggings, even at important sites, since they did not provide full information. No cultural framework can ever be formed with limited field work. The discovery of Mehargarh and its large-scale scientific excavations has given us a solid base to overhaul the status of Baluchistan in the archaeology of the Orient. It is now more than clear that this was not just another refuge area for the fleeing Iranian and Mesopotamian people. It was as much a nuclear area where indigenous culture-growth occurred as in Iran and Iraq.

If one studies the cultural assemblages of Baluchistan, Iran, Soviet Central Asia and Mesopotamia minutely, it will be apparent that, except for a few pottery motifs, nothing is really common amongst them. However, one should note that these Baluchi cultures had not developed in isolation and, for that matter, no culture in West Asia developed in complete isolation. The limited exposure to the outside world might have helped them in their cultural advancement. This is true of all cultures, for the simple reason that cultures left completely to themselves stagnate through millennia—as we find with many tribal cultures in South Asia. It is only when they interact and enter a stage of aculturation of a kind that they add new dimensions to their own culture-growths.

## SOUTHERN BALUCHISTAN AND SIND

Let us now turn to southern Baluchistan and Sind. Here we face a more complex situation than what we have seen in northern Baluchistan. There is not a single site in this area with a complete sequence of cultures representing the region comparable to Mehargarh which is now more or less a yardstick for northern Baluchistan. However, it is very hard to find a homogeneous cultural sequence on such a vast area stretching from the Gomal plains to the Makran coast in a country like India where regional differences occur every 60 kms. Southern Baluchistan differs from northern Baluchistan not only culturally but also geographically. Southern Baluchistan is the extension of Iranian Plateau. This region is generally more arid and rainfall is of a more torrential kind. It may be noted that permanent settlement in the south was initially, then, 'subject to greater seasonal stress than in the north where the rainfall was more constant.' Early settlements in the south were, however, generally 'sporadic and along the small river valleys while in the north they were in clusters and concentrated along natural passes and perennial rivers.'

South Baluchistan has not yet been fully and systematically explored by archaeologists so far. Not many sites were excavated to provide proper information regarding the initial

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establishment of the area. Balakot, Nindowari, Amri and Kot Diji are a few sites which have been scientifically excavated only in the recent past. But, unfortunately, none of them has revealed the early neolithic phases of human occupation in this area as Mehargarh and Kile Gul Mohammad have yielded in northern Baluchistan.

At this juncture, we face a very complex situation. South of Nal and the Khuzdar area, there are numerous sites located with some density in such regions as Kolwa at the head of Kez valley leading to Makran, the Wadh, Drakalo and Ornach valley and northern Las Bela. These sites shared several common factors. In southern Baluchistan and Sind we have four fully developed and distinctive cultures flourishing simultaneously: Nal, Kulli, Amri and Kot Diji. The last one is the phenomenon of the Greater Indus Valley so it will be discussed along with that. However, the sites related to these cultures have not yielded the initial stages of cultures. The Nal cultural material at Sohr Damb came from the cemetery area and is found in its mature form. Similarly, the Kulli cultural material from the site of Kulli or Mehi shows the developed stage. What these materials, along with the wares, looked like in their formative stages, we have yet to know. Amri, of course, in the early levels, witnessed the presence of a large quantity—80 per cent—handmade pottery plus the fine bichrome Amri potsherds and Togau pottery.

A few questions naturally come to mind when one goes through the material. The antiquity of the first habitational occupation in southern Baluchistan, the authorship of these cultures in terms of indigenous framework and diffusion both, intermingling of various traditions and the emergence of a new culture-form are some of the important issues.

The questions are simple and direct but the answers are complex and somewhat confusing. No one, exactly knows when southern Baluchistan was first inhabited by civilized people. Dales (1965:262) is of the opinion that the process of colonization of southern Baluchistan lies in the shift of culture from northern Baluchistan to southern Baluchistan in his phase D. However, this hypothesis looks far from the truth. So far, no definite neolithic phase can be traced even in Kalat. However, some recent researches have indicated the possibility of a neolithic occupation in Sind. The existence of a neolithic occupation will not be an abnormal phenomenon for this region as some hint of a mesolithic occupation is attested in the Tharro hills (Fairservis 1971:175) where the flint industry of the mesolithic type was known when Amri was settled. Besides these stray remains, the first settlements which we come across in the area are the Nal settlements, temporarily kept in the D.S.I Phase of the Quetta Valley as the pottery has some resemblance with Kechi Beg polychrome. Several Nal settlements have yielded a mixed deposit of Nal and Amri Wares. This shows that both cultures were contemporary. The Kulli culture was also partially related to Nal and Amri, and partially contemporary to the Mature Harappan Culture.

On the basis of these data, it was around 3500 B.C. that the first settlements grew in southern areas. Some beautiful Nal pottery has been found at Mundigak III, Anjira IV, Mehargarh VI though always in limited numbers. This shows, they were imported from some Nal settlement. The evidence indicates that Nal type settlements were dominant in central Baluchistan, south of Kalat. In the valley of the Hab river also, Nal settlements are recorded. The slope of southern Baluchistan is generally from north to south except on its eastern fringe where local streams (Mula, Kolachi) flow into Sind through gaps in the Kirthar range. The principal rivers run southwards and pass through valleys where settlements are heaviest. Thus the Hingol emerges in the Surab region and passes through Gidar, Gresha, Nal and Jhau

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before crossing the coastal ranges and falling into the sea. The Mashkai with the Nundara, drains the region of Jebri and Gajar and joins the Hingol in Kolwa. The Porali starts in the Wadh area, just south of Khuzdar and Nal, and flows through hills country to the plains of Las Bela. The Hab of course, is the principal stream running north to south in the hill country east of Las Bela proper.

These river systems with their local tributaries were the locale of early Nal settlements. These Nal settlements are located, for the first time, in the low lying alluvial plains of the southern Indus Valley (or western Sind) and the district of Las Bela. DeCardi (1964:20-29) has noted Nal pottery down at the Mula pass in the Mula valley at Jahan.

A number of Nal settlements have been reported by Majumdar around the Gaj river Pass in Sind and in the valley leads to the sites around Rohel-jo-Kund in the plains of Rajo-daro (Krishna Deva & McCown 1949:12-30). At few sites, Majumdar noted Nal mixed with Amrian Ware. At Balakot also, Nal and Amri are both recorded in Period I. Amri Ware on the other hand is concentrated in Sind and has not crossed the Indus. It is around Lake Manchhar at the foot of the Phusi Pass and close to routes from Kohistan.

Majumdar's (1934) survey revealed Amri settlements close to rivers and streams near their point of debouchment on to the flood plains of the western Nara-Lake Manchhar system. Some sites, like Gazi Shah and Damb Bhuti are close to hot springs. These sites are small villages where the inhabitants built mud-brick houses on boulder foundations. Often these villages were situated on spurs or hillocks (Damb Bhuti, Naig, Chauro) but the majority of them are located in the low lying area at the foot of the hills or spurs (Ghazi Shah, Gorandi, Pandi Wahi). Several sites, like Lohri, in fact, lie directly on the Nara-Lake Manchhar plain. *Fig. 2.19*

Majumdar (1934) discovered some prehistoric remains across the valley. The valley had been once heavily populated by these prehistoric people as the location of the sites, (Bandhani, Chauro, Dhal) of their culture show prehistoric occupation that can be traced beyond the Baran Nai basin and along its course to the vicinity of Thana Bulla Khan (Pokhran-Khajur Arabjo Thana, Ahmad Shah Othmajo Bhuti).

The southernmost Amri culture site is the Tharro hill located close to the Indus delta. The type site is Amri, situated south of Lakhi hills eastward into the Indus Valley, just below the lake Manchhar. It is less than 32 kms from the Bandhani river sites.

The third distinctive culture of the region is Kulli which originally belongs to the Mashaki-Kolwa region. However, a number of sites have been found in the Edith Shahr complex of the Walpet area of Las Bela (Fairservis 1971:195-205). The most important sites of this culture are Kulli, Mehi, Nindowari, Niai Bhuti, Balakot and Shahi tump. *Fig. 2.19*

The distribution of sites of all those three cultures is very clear but their authorship is still controversial though a decade ago it was treated as settled. Scholars believed that the traditions of Amri bichrome and Nal polychrome had been received from West Asia especially from Jemdet Nasr. Dales (1965:263) has also connected these traditions with West Asia though he has not quoted any specific area or site in this context. Fairservis's (1971:163-164) observation about Nal in this context is significant. He writes:

> The diffusionary line which runs from western Iran to the northeast, through Afghanistan and into the heart of Baluchistan is . . . rather explicit. Chronologically, the evidence indicates that the Nal settlements probably date to a period around 2500 to 2000 B.C. They are typologically analogous to the nothern cultural assembalges as well as the last

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manifestation of them as a part of a purely Iranian ethos.

Fairservis (1971:223) believes in diffusion and quotes Dyson's 'Early Dynastic Related Horizon' in which the second major movement took place eastwards, and he sees its eastern terminal in the Kulli cultures of southern Baluchistan.

Fairservis (1971:226-227) has also quoted the Bampur material complex which yielded some pottery motifs of the Kulli type. As for the Kulli type pottery found in the Persian Gulf sites, Fairservis feels that since it was western in origin, the Kulli pottery diffused into the Persian Gulf. However, the Kulli pottery found in the Persian Gulf is not a part of the process of migration, but of economic interaction. The fact remains that even the large jar with a painted shoulder from Balakot (Dales 1979: Fig. 11) has no parallel in the Persian Gulf.

Piggott (1950:95) on the other hand connected the Amri Nal cultures with the Early Dynastic Sumer in the broader sense. For Kulli culture, he (1950:115-116) is on more firm ground and connects it with Elam and Mesopotamia. The Kulli pots with landscapes and animal friezes on them find close stylistic parallels on pots known from Susa and Khuzistan and also from the Diyala region near Baghdad, known as scarlet ware. However, the author has examined the scarlet ware. She noticed that except for a general resemblance there is nothing common which can really linked the two.

One can therefore see how western scholars felt that some dominant traits of Early Dynastic Sumer migrated to Baluchistan. Since Early Dynastic Sumer was at its height, they felt the movement has to be considered from West to the East. According to them, this very factor played a decisive role in the rise of the 'civilization' in the Indus Valley. This was, therefore, the work of scholars of South Asian Archaeology who settled every feature of Baluchi culture in terms of a West Asiatic setting.

But the discovery of Mehargarh has forced us to reconsider these vital issues. As said earlier, northern Baluchistan can now be safely placed on the map of nuclear cultures. Southern Baluchistan, however, has still not given us a Mehargarh. But there is every possibility of a primary mesolithic and neolithic site in southern Baluchistan and Sind. But that is a different matter. At present, we can only say this much that the chalcolithic cultures of this region owe their origin to northern Baluchistan cultures since none of the possibly Iranian cultures show evidence to the contrary.

The material from Tepe Yahya, Bampur, Shahdad and Shahr-i Sokhta—important sites of south-eastern Iran—have not yielded anything distinctive which could owe its parentage to the Nal-Amri and Kulli cultures. Yahya has one sherd of Nal Ware from IV C and an Amri sherd from the surface; otherwise the pottery is not anologous to these cultures at all. The Bampur cultural complex has a few Kulli motifs. However, this is not surprising as some of the Kulli people may have been working in this area as middlemen in the long distance trade of the Harappans. The stone vases (Asthana 1979B:55-60) found at southern Baluchistan sites may have come from Kirman, probably from Yahya or Shahdad, Kulli objects can be seen in the Kirman region also. A potsherd from Yahya bears a Kulli Bull motif, though the ware is different. On the same way, Shahdad has yielded a plain Kulli type pot. (Personal examination). A Kulli painted motif occurs on a pot from Shahdad although the form of the pot is not Kulli.

Shahr-i Sokhta (Tosi and others 1977.28) has also yielded two or three Nal pots, probably imported from some Nal settlement in southern Baluchistan. The author has examined the

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material from these four sites and is of the opinion that none of these sites could even be remotely the original home for Amri, Nal and Kulli cultures.

The next possible area that could be the original home of southern Baluchi cultures is northern Baluchistan. All the traditions of southern Baluchi ceramics are present in northern Baluchistan in their earlier stages, though in a subtly different fashion. Bichrome is known to us from neolithic levels and polychrome from the chalcolithic levels of Mehargarh. The polychrome is prominent at Kechi Beg.

The faunal and floral motifs are available at Mehargarh in large numbers. Could the Mehargarh Bichrome and Kechi Beg Polychrome be considered as the ancestors of the Nal, Amri and Kulli wares ? Fairservis (1971) in his book has given a number of pictorial charts which show the resemblance between the motifs of Quetta and Amri, Nal and Kulli ceramics.

It is possible that semi-nomadic people moved with the Bichrome and Polychrome potteries and settled in southern Baluchistan in stages. Their mixed traditions both in pot forms and decorative motifs at a later stage may have formed these homogenous potteries. However, it appears that the links of the transitional phase are still missing and that we have to find them somewhere in central Baluchistan. The Kalat region may yield a site where the transition from the Kechi Beg Polychrome to the Nal Polychrome lies hidden. The Nal Cemetery, significantly, has the Kechi Beg white-on-black open bowls along with Nal Ware pots.

Amri, (Casal 1964) in its lower levels, has 80 per cent handmade wares, a few typical wheel-made Amrian sherds, and Togau C pottery. In the upper levels, the quantity of wheel-made bichrome pottery increased as is noticed through the cultural deposits of Periods I and III. This may, therefore, be documented as solid evidence for the evolutionary process through which the bichrome ware passed. Its first impulses were received from the Bolan area but later on it developed here locally. On the other hand, it is of great interest to note that while Amri has some Kot Dijian pottery, Kot Diji does not have any Amrian pot.

It is, therefore, clear that, as so far there is no report of a well stratified neolithic settlement in southern Baluchistan (though the possibility of their being in existence cannot be ruled out as the Mesolithic sites have come to light at Tharro hills, etc. in Sind), the theory of the indigenous origin of Nal, Amri and Kulli cultures in southern Baluchistan cannot be upheld. Their bichrome and polychrome traditions and the floral and faunal motifs on their pottery are, to a significant degree, attested in the Quetta-Bolan area. For still earlier, comparable material, one can go to Elam and Mesopotamia but that is a different matter. Other cultural traits in southern Baluchi chalcolithic cultures, e.g. Kulli figurine, which resembles the Zhob mother goddess though with distinctive regional variations also show the movement from north to south.

Some other cultural traits like metallurgy, lapidary plastic arts and crafts, also seem to come from northern Baluchistan although their products, from the very beginning show marked distinctiveness. However, the proposition of their northern origin may be disproved in the future when site like Mehargarh is eventually found in southern Baluchistan also. Central Baluchistan, however, seems to be the most promising area for unearthing clues to the southward movement if our hypothesis is correct.

The decorative motifs found on Amri, Nal and Kulli Wares are highly stylized. Togau C is a widely distributed pottery. So is Nal. Amri had, of course, limited distribution though the Amri-type pottery, etc., have been found at Mundigak also. These small pieces of evidence are, however, only suggestive; the final answer will rest on the spade.

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Mughal (1970) observes that the Early Harappan culture of Kot Diji-Sothi complex in the Indus system evolved exclusively out of the Baluchi chalcolithic cultures. However, it appears that this Kot-Diji-complex was essentially an indigenously evolving river-valley phenomenon, although the first impulses in the form of colonization of the Indus system, may have come from the village communities of Baluchistan. The term 'colonization' stand here for the process by which an uninhabited land is occupied for settlement purposes.

Recent excavations conducted at Balakot, Jalilpur, Gumla, Sarai Khola and Banawali have brought to light the sequence of early cultures as it appeared in the Indus system. It shows that there were three phases of colonization of this region before the Harappan Culture appeared on the scene. The first is represented by the neolithic cultures of Sarai Khola I, Gumla I and Jalilpur I; the second is represented by a kind of mixed chalcolithic Baluchi cultures of Amri I, Balakot I, Kot Diji lower levels (Levels 16 to 10 from bottom upwards) and Gumla II, all in Indus basin, and the third is represented by the upper levels of Kot Diji (levels 9 to 4 from bottom upwards) and Rehman Dheri, Gumla III in the Indus basin, Kalibangan I, Jalilpur II, Banawali I, Siswal I, etc. in the Ravi-Ghagger Valley and Sarai Khola II in the Potwar region near Taxila. In this connection it may be pointed out that stratigraphically speaking, while phase I is a separate phase, marginally connected with Phase II, Phase II itself is organically connected with the Phase III, the latter being only an evolutionary stage of a process initiated in Phase II. The reasons for dividing the Pre-Harappan cultural complex into two phases are two: (a) the appearance of a large number of non-Baluchi elements in the culture-matrix, and, (b) the phenomenal growth and expansion which could not be visualized exclusively in the context of the known dynamics of Baluchi cultures.

**Phase I**

The neolithic cultures of phase I, as said earlier, have been identified at Sarai Khola I, Jalilpur I and Gumla I. At Sarai Khola I the culture is represented by the abundance of bone points, microblades and handmade red burnished wares with basket like impressions on their bases (PA 1968). A few examples of handmade pots with outer surface decorated with applique design have also been found. At Gumla (Dani 1970-71) however, no pottery has been found so far, although short chert blades and bone points of Sarai Khola type have been reported. Jalilpur (Mughal 1974a) has, in a sense, yielded a richer material. The pottery, which was handmade included small cups and large jars of several plain red fabrics. At the end of period I appears painted pottery—red with paintings executed in black, brown or chocolate. The remains of two rammed earthen floors with line bedding have also been found. The other antiquities include chert blades, some with retouched edges, netsinkers, beads of gold sheet with tubular perforations, cylindrical and biconical beads of terracotta, and numerous bone points of Sarai Khola type. Cut and charred and uncharred animal bones show that the people ate meat; about cereals we have no knowlegde so far. Although the chert blades and bone points found at these places have typological similarity with those found at Kile Gul Mohammad I, Rana Ghundai I and other places in Baluchistan, yet no specific site could be located for their origin—they are of the generalized types.

The above quoted evidence shows that the people who, for the first time, moved into the Indus system and nearby regions were not the Harappan or pre-Harappan chalcolithic people but

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the neolithic folks. They established small pastoral settlements, and lived in huts. They produced handmade largely crude, pottery and stone and bone tools. Although it is difficult to establish their ancestory at this stage, yet it is possible to make a few suggestions. Northern Baluchistan appears to be their source, at least for Gumla it is likely to be the main if not only source. The discovery of Mehargarh has confirmed this hypothesis. For Sarai khola and Jalilpur, however, northern Baluchistan might not have been the only source. In the potwar region, near Rawalpindi, De Terra and Paterson (1939) had long back located neolithic assemblage with flake tools and this region could also be a source for these neolithic folk. Nothing much and definite can be said about this rather 'exploratory' phase of colonization except that due to their limited technological resources, there being no evidence of copper implements, wheeled conveyance and large—scale agriculture, they could not spread far and wide and initiate the process of urbanization.

**Phase II**

The second stage of colonization of the Indus system was initiated by the chalcolithic village communities living in the hilly tracts of Baluchistan. Probably, the pressure of growing population in comparatively restricted lands for agricultural pursuits pressed them in the last quarter of the fourth millennium B.C. to move into the plains. They came in the Indus basin in different waves and several groups, often intermingling in different proportions, that is absolutely clear from the pottery assemblage discovered from Period I levels of six to seven metre deposit of Balakot (Dales 1979: 250-252). It contains both handmade and wheel-made Nal Polychrome Ware, Anjira III Ware, Togau C Ware, Periano Ghundai Ware (with black band), Damb Sadaat (II-III) Ware and Amri I (A-D) Ware. However, it is significant to note that the mixed culture at a latter stage slowly tended to become a homogenous one as will be shown a little latter. At Kot Diji (Khan 1965) also the pottery from the lower levels of period I contains Periano Ware, Sur Jangal Ware, Damb Sadaat (II & III) Ware Siah Damb and Zari Wares. It clearly shows that the population of the earliest phase was a mixed one, consisting of several groups belonging to Baluchistan. Sarai Khola II (PA 1968) has the same story to tell. The lower levels have yielded potsherds of Anjira I Ware, Siah Damb I Ware and Kile Gul Mohammad Ware. Gumla II (Dani 1970-71) also includes pottery of north Baluchistan and north Iranian types—Hissar, Sialk and Anau-Namazga easily came to our mind although this observation is limited to generalized similarities and not identical types. *Fig. 2.23*

The movement of the Baluchi people into the Indus basin and the Potwar region seems to have followed four traditional routes.

(i) the Gomal Pass in the Zhob Valley—located midway while moving from Kabul or Kandhar to the Punjab plains. This pass follows the course of the Gomal after it enters the Darajet in Dera Ismail Khan district. The Kurrum Pass also falls in this group. Type site : Gumla;

(ii) Loralai Valley—south of Gomal. It joins south-eastern Afghanistan, i.e. Ghilzai and Durrani country with the Kachhi plains. Type site: Dabar kot.

(iii) Sanghar Pass. It joins Kandhar, Multan, Central Punjab and Kandhar to the West via Loralai Valley or the Bori tract. Type site: Jalilpur;

(iv) Bolan Pass. It connects the lower Indus Valley with Kachhi plains (Mehargarh)

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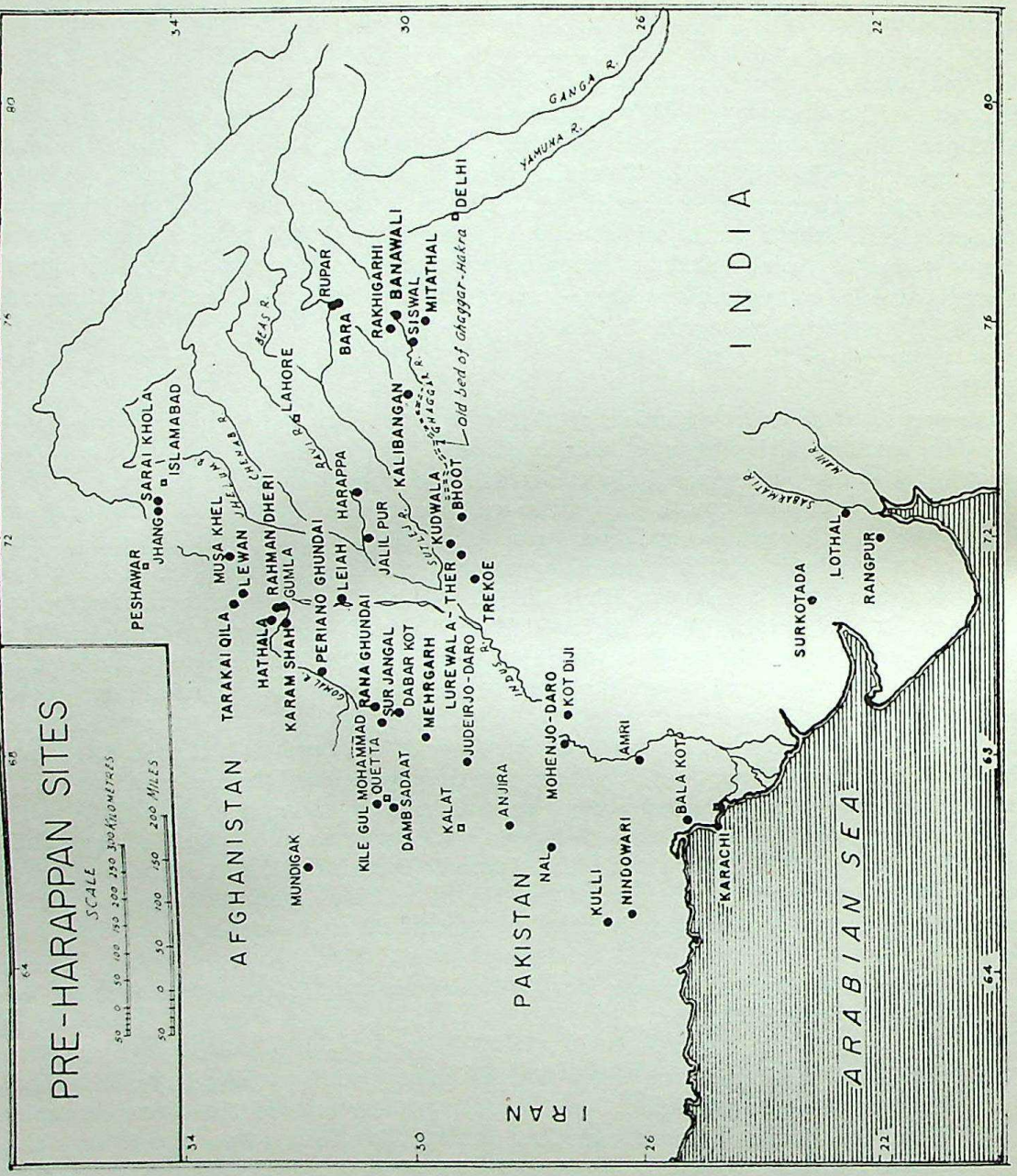


Fig. 2.23. Map showing important Pre-Harappan sites.

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Quetta and Pishin Valleys as also Kandhar and Helmand Valley. The Mula Pass also joins the lower Sind with South Central Baluchistan: Type site: Amri.

**Phase III**

The third stage of colonization of the Indus system is however, an extension of the second. It also marks the spread of the Indus basin people into the Ravi Ghaggar plains. *Fig. 2.23* Obviously, the Baluchi elements which had come to stay in the pre-Harappan complexes of the Ravi-Ghaggar sites. This alone explains the presence at Jalilpur of 'Periano Wet' and 'Khojak Parallel Straited Wares', vessels with thick black band, all of which originally belonged to Periano Ghundai or some other site in the Baluchi hills. The presence of some pot sherds of Kile Gul Mohammad at Sarai Khola also testifies the same fact. The third stage, in a sense, may also be taken as the matured stage of the second. At Kot Diji (Khan 1965: pl. XVII a-b) it evolves pottery decorated with fish-scale motif, bull-head with slightly curved horns, intersecting circles, terracotta toy-cart frames, wheels and triangular 'cakes' which are otherwise considered to be the characteristic elements of mature Harappan culture. In terms of brick sizes ($40 \times 20 \times 10$ cm), building methods (mud-brick houses, sometimes with stone foundation), stone-tool technology (chert blades grinding stones, chert disc beads), art styles as exhibited in pottery (e.g. animal heads with huge gracefully curving horns and plant motifs with similarly curving leaves) and clay figurines (bull heads) Balakot (Dales 1974) also evolved a high stage of culture. From the middle levels (phase IV) came an oxidized lump of copper also. And it is because of this that the excavator rightly observes: In addition to the stylistic parallels with other sites in Pakistan, we are basically dealing with a highly developed local tradition which must be studied on its own grounds. A word may, however, be added here. Once we record the distribution of pottery, stone, bone and metal objects through different levels it becomes clear that from the earlier level to level (or phase) IV the cultural assemblage was extremely poor consisting of Nal, Togau, and periano pottery, chert blades and stone grinders and pounders; it is only from the transitional phase of IV and V that bone points, paste beads, terracotta bull's head and copper start appearing. The situation is comparable with Kot Diji. A distinction has, therefore, to be made between the lower and upper levels of Balakot I.

At Gumla (III), along with the Periano and Kot Diji wares, Dani (1970-71) has discovered two antimony rods and a nail parer of bronze. Jasper beads, bangles of shell and terracotta, saddle querns, grinders, bone implements, blades and scrapers of stone and stylised terracotta female figurines are some of the other important antiquities. Mud-brick houses also appeared in this period.

At Jalilpur, Kalibangan, Banawali, Siswal, Rakhi Garhi and other places the pot decorations included several new items, e.g. white bands and curves, dear and trident. It is called Sothi Ware which is a local development of the Ravi-Ghaggar plains, although some of its shapes and decorations are found at Kot Diji and various sites in the Bahawalpur region on the Ghaggar. The architectural features of mud-brick fortifications and platforms and mud-brick houses with several rooms and drains paved with burnt bricks and agricultural innovations of 'twin crop' system in systematically ploughed fields etc. as evidenced at Kalibangan, definitely mark at Kot Diji, Kalibangan and other places a stage much more developed than that of Gumla II, Amri Ia and Ib, Kot Diji (lower levels), Balakot I (lower levels), etc. At Banawali there appeared during this phase the system of parallel running mud-brick platforms, a feature which was till now considered to be element of the Harappa

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culture as evidenced at Kalibangan in the citadel complex. Similarly, if we agree with the excavators of Kot Diji, the system of citadel was also there though in rudimentary stage. The occurrence of copper-bronze implements, lapis and steatite objects indicates the evolution of a complex system of trade and commerce.

From the above survey two things emerge very clearly (i) the Baluchi elements were more dominant at sites in the Indus basin, including the piedmont region than at sites further east of the Indus basin and (ii) that some of the cultural elements found at Jalilpur, Kalibangan and other eastern sites which appear to be Baluchi in form may as well have come from the Indus sites, such as Kot Diji, as Kot Dijian items, e.g. short-necked globular vessels with broad black band round the neck need not have come at each site from Baluchistan. The same may be said about the vessels with flanged shoulder. Parallel sided stone bladelets and bone points also betray the same feature. This fact clearly shows that the process of Indianization of the Baluchi elements was in the full swing. The Kot Diji—Sothi sites throughout the Indus system are marked by local characteristic typical of the river valley cultures, i.e. large sites, duly fortified, with closely packed brick houses, wheeled conveyance and agricultural fields with plough cultivation and 'twin-crops' system. They exhibit the emergence of a process by which different communities progressed from different stages of agricultural villages to the first cities with corporate life-style and a kind of regimented socio-politico-economic structure.

* * *

The artefactual data have shown that the vast region, stretching from the present day Iranian borders to north western India, had witnessed the growth of several cultures from the neolithic times. Northern Baluchistan, Quetta-Bolan area including the piedmont region, in particular, was the most crucial area for the growth of early cultures and for the alien cultural impulses.

From the Mesolithic to the Neolithic, i.e., from the hunting stage to the herding stage the change took place in this area only. The evolutionary stages of various Baluchi and piedmont cultures are documented at the recentaly discovered site of Mehargarh. From this area the first cultural impulses travelled to southern Baluchistan and Indus system. At a later stage, the intermingling of various homogenous culture complexes in the Indus basin gave birth to the Kot Diji culture. The Sothi culture in the Ghaggar basin was a cognate complex. The model presented here is therefore a total reverse of the model which explains the birth of Indus Civilization in the diffusionary impulses from Mesopotamia to Baluchistan and then from Baluchistan and the Indus. It may, however, be added that our model also rejects the theory of 'growth in splendid isolation'. In other words, the model accepts active culture-contact situations as a pre-requisite of culture growth. It, therefore, easily explains the presence of a limited number of Iranian and Mesopotamian artefacts in Baluchistan and Indus plains.

Time to time these early Indian cultures were exposed to the outside world as the material culture clearly reflects. But the exotic only merged into the 'local' cultures; only at a few places they can be discerned prominently. During the later periods the contacts were limited to the economic interaction. The continuity in the basic character of these cultures itself is the proof that these cultures were indigenous to the area.

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# DOCUMENTATION OF FRESH DISCOVERIES 3

## SOUTHERN AFGHANISTAN

ARCHAEOLOGICAL excavations at Mundigak, Deh Morasi Ghundai and Said Qala Tepe have together unfolded practically the whole story of cultural development, alongwith transitional phases, in southern Afghanistan during the prehistoric times. Till 1950 the world was practically ignorant about the prehistoric part of Afghanistan ; it is in Late 1950s that a French delegation took initiative and started digging at Mundigak (Casal 1961) under the direction of J.M. Casal. Although limited, the available information clearly indicates that the prehistoric cultures of Afghanistan underwent fundamental socio-cultural changes and ecological adjustments that permitted the two most important transformation in later prehistory to occur—the development of an economy based upon domesticated plants and animals and the formation of stratified societies.

### Mundigak

The site of Mundigak, containing a number of mounds, is situated in the valley of the Kushk-i-Nakhud Rud near Kandahar. Like most areas of Afghanistan, this region is also arid. The location of Mundigak in the river valley of one of the major tributaries of the Helmand with a small but quite fertile land explains eloquently why people lived here for several millennia, developing and enriching their culture from the Neolithic to the Bronze Age. Deh Morasi and Said Qala, two other smaller, sites located within 30 km of Kandahar near Mundigak, in almost similar geographical setting appear to have served as important support sites. *Fig. 2.23*

The excavations at Mundigak have brought to light the remains of seven major occupational periods, of which the first four fall in the area of our study. Chronologically, these periods represent the time-span of approximately 3000 years, starting from the Ceramic Neolithic to the Harappa Culture. During this period, Mundigak developed from a small agricultural village (Period I-III) to an important urban centre (Period IV) ; it was abandoned in the early Iron Age. It is Mound 'A' which has yielded the complete sequence of cultures. Some mounds produced the occupational remains of only Period IV (Shaffer 1978b : 71-186).

### Period I

Period I has been sub-divided into five phases (I. 1-5). These divisions are based upon distinctive potteries and structural remains. Phase I.1 represents the semi-nomadic settlement with handmade coarse wares. But the situation quickly changed, and in Period I.2-3 there is the evidence of transitional phase—from the Neolithic to the Chalcolithic. Period I.4-5

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shows the signs of some cultural development at the site, but not very significant.

*Architecture* : Phase I.1 and 2 are devoid of any permanent architectural remains. However, Casal has suggested tent like structures for these phases. Phase I.3 has yielded the remains of first permanent structure which consisted of two Pisé walls. The mud-bricks were used for the first time in phase 4 and 5. In phase 4, rectangular room units of different sizes with walls made of single or double coursed bricks, and two complete structures with doorways one on either side (interior and exterior). Normally the walls are reinforced with buttresses. Three units have yielded rectangular ovens of hearths. Phase 5 shows different characteristics though the houses were still rectangular in shape and sometimes they were having partition walls with doorways. In this phase the foundation wall was made of pise', sometimes mixed with stones below the immediate living surface. Some structures had of course no proof of doorways. Like the houses at the Neolithic Hacilar, the access was either through an elevated doorway or via the roof. Rectangular mud ovens determined the function of a few rooms. Two large oval or U shaped mud-brick and mud ovens, located in an exterior open area, show the flexibility in cooking areas. According to Shaffer, however, their location in a large open-space exterior, but adjecent to habitations, might indicate the beginning of functionally specific areas within the site.

*Ceramics* : The pottery is characterized by a buff ware, predominantly wheel-turned, but with small quantities of handmade examples. The basic decorative design for Period I contains geometric motifs in black over the red background. In phase I-3, two sherds of buff ware show caprid motif for the first time. This is similar to 'Togau A' pottery in Central Baluchistan at Siah and Anjira. Jars and cups were the main ceramic forms.

The ceramics of Mundigak I.2,—3 seem to represent a single cultural development demonstrating a limited degree of internal change with a wide range of variation.

*Lithic artefacts* : Stone artefacts have been recorded from all the occupational periods (I to IV). Amongst them rectangular milling stones, rectangular to oval hand-stones or ground-stones and large trapezoidal holes retouched for hafting are worth noting. The milling stones or saddle querns, sometimes with one raised end, were made from a medium to coarse grain basalt. Hand-stones or pestles were manufactured from a medium to fine grain basaltic pebbles and had grinding scars on one or both surfaces. Another important type worth-mentioning is a large knife like scraper, made of large cortex flakes. It has been found through the entire sequence at Mundigak. These flakes were usually retouched along one edge and were occasionally polished through use.

*Bone artefacts* : Bone tools, limited in variety, have been recorded from Period I-III. The most common bone artefact was the pointed awl or punch. Hundreds of them have been found in the excavations. Later on probably they were replaced by bronze points. These awls or punches were manufactured from the long bones of various animals (sheep: goat). The first example has been recorded in Period I.3. Three small polished rectangular pieces or bone with several perforations, whose function is unknown, have been noticed in Period I.

*Metal artefacts* : Period I.2 at Mundigak has yielded the first metal artefact—a flat blade like instrument. Period I.4 has given simple type of bronze point or punch with a circular cross-section which was found throughout the habitation. Metallurgy started in Period I.5 where one bronze artefact was found. It has been scientifically analysed and that proved its low tin content : 1% tin ; 0.15% iron and the rest copper.

*Small miscellaneous artefacts* : Spindle whorls have been recorded through the entire

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sequence at Mundigak. Period I.4 to II yielded ceramic spindle whorls out of which 'cone' type was most common.

*Stone Vessels* : Simple alabaster bowls with straight angular sides were very popular with the people. It was first noticed in Period I.2, and it continued on a large scale till Period IV.

*Bead Pendants* : Period I.3-II yielded a limited quantity of beads. These are simple discs, tubular, trapezoidal, cylindrical, biconical and lozenge shaped. Various stones have been used for these—white limestone, lapis lazuli, jade (?), quartzite, and even shell and pottery.

*Terracotta Figurines* : Four figurines of humped bull first appeared in Period I.3-5, and their number increased in Period II.

*Faunal Remains* : Domesticated animals were identified for the first time in Period I and were represented by the sheep, goat, cattle, ass, horse and dog. The wild animals were gazelle, ibex and lynx.

**Period II**

Period II yielded almost the same material as was found in the late levels of Period I. It shows the continuity of culture. In fact, some scholars have clubed them together. However, these levels represent the chalcolithic settlement which was advancing in technology, trade and other aspects of culture growth. The change is qualitative. It is evidenced by the finding of somewhat complicated metal tools, seals and luxury items. The architecture shows the characteristics of a settled and advancing society.

It is also divided into three phases : II.1 to 3, and the last phase is further divided into two units—A and B. Several structures were found in II.1; they increased in II.2 but decreased in II.3.

Mud-brick walls continued to be made in this period also. Rectangular structures were found but different from those in Period I—they consisted of two rooms, one big and one small (4/5×6 m and 2×4.4 m) both connected by doorways. During phase I.2 most of the rooms had an exterior entrance where, as in phase II.3, only one such structure was found. Buttresses for walls were frequently made on the exterior. Small windows and wall niches have been encountered. A marked feature, and indeed a very important one, of this period was a much greater density of structures, which indicates growth as well as density of population—the first steps of urban settlements.

Like those of Period I, the structures were still having a centrally located interior rectangular hearth set into the floor. Now they have a centrally located firepit, a feature which continued in all subsequent periods.

A large open area and a single structure with an interior rectangular pit constructed with pisé and filled with ash and debris deserves special mention. The latter one had some special function to perform but what exactly, we do not know. The former one was possibly a cattle-pen. During phase II.2, this area had a dividing wall and a substantial rectangular oven with two U shaped chambers. It appears that now this area was used for some other purpose, certainly not for keeping animals. A well and its nearby area, lined with stone boulders, have been noticed. South of the well was a small open area with a rectangular oven. Shaffer has suggested some interrelated function of these structures. The nearby structures of this area also had interior hearths. During phase II.3 open areas increased. Probably the house pattern also changed as, except for one structure, none had any entrance, though they still had interior hearths and mudfloors. Shaffer feels that the entrance was through the roof and these rooms had a non-habitational but functional specialization, such as storage.

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During Period II, phase 3a, again in the open-area a rectangular mud-brick oven with two U shaped chambers was constructed. It continued in phase 3b. It is somewhat unique in character but was found in all the three phases of the period.

*Pottery* : The pottery of this period has created some problems for archaeologists as the crude handmade undecorated pottery increased fantastically, to 97%, while the decorated wheel-turned pottery counts for only 3%. Casal interpreted this change in terms of cultural stagnation. But this observation is based on limited excavations and erroneous value judgement.

All the vessels were made of buff red paste. However, the handmade pottery has coarse tempering materials added. These handmade potteries are similar to Said Qala Coarse Ware. The main types include simple angular walled bowls and large wide mouthed straight sided jars with pinched rims which appear for the first time in phase II-1 and continue through Period III. A shallow flat bottomed bowl with vertical walls appears in ph. II.3 and another bowl with sharply incurving walls appears in phase II.3, and both these types continued in Period IV. A single handmade pedestalled vessel was found in this period.

The frequency of the wheel-turned pottery increased, and in phase II.3 it reached 40 per cent. Decoration was found mainly on bowls. Their surface had a thin white or buff coloured wash. The decoration was confined to black geometrics, such as the festoons below rim; undulating horizontal lines, interspaced with horizontal lines; and an undulating line bordered by a lower horizontal line and filled with hatches.

A single buff potsherd with a grey slipped exterior and light red interior was found in phase II-1, decorated in brown colour with parallel horizontal lines bordering a panel characterized by central undulating offsets on both sides by opposing hatch marks. Casal feels that it is similar to Rana Ghundai (Period II) pottery while Mughal feels that its resemblance lies in the loop and tassel design of Togau Ware found in Siah II levels.

The tools of Period I were still in use in Period II. Flint blades and points were used in Period II for the first time. These blades are large and have triangular and trapezoidal cross-sections. Bifacially flaked lanceolate flint point found in Period II continues throughout the sequence. Bone artefacts of Period I are still in use.

*Metal tools* : The first examples of a true projectile point was identified in phases II.3, being lanceolate in shape with elliptical cross-section. The type became increasingly frequent in later period. The first examples of 'luxury' type metal artefacts were located in phase II.3. These were pins, one with a double volute and the other with a flattened and perforated end.

*Other artefacts* : Period II had spindle whorls similar to Period I examples. Stone vessels of Period I were continuously used and beads and pendants were also common to Periods I and II.

*Seal* : A single example of steatite compartmented seal with geometric motif made its appearance in Period II.

*Terracotta figurines* : The limited findings of humped bull in Period I increased in frequency during Period II. A single example of an anthropomorphic figurine was found in Period II. This is a crudely modelled human torso of indeterminate sex.

*Faunal and Floral remains* : The faunal complex of Period II is the same as of Period I with the addition of a wild bird of prey. More important, the first cereal remains identified at Mundigak come from this period and they include domesticated wheat (*Triticum compactum*).

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**Period III**

This period established a few landmarks in the socio-cultural history of this site. It was a period of vitality and expansion. It brought about some change in movable antiquities but the architectural continuity was maintained. Mud-brick structures are basically similar to those of Periods I and II but the small structures of two rooms are rarely found. During this period the signs of rebuilding the structures as additional walls, interior features and repairs are evident. Several structures are found with common or closely abutted walls which might indicate that they represent a socio-cultural unit. The entrance was provided by a small lateral doorway or through the roof. They are provided with hearths too.

Period III.4 was the last phase which had large rectangular multi-chambered mud-brick ovens. A square structure witnesses the support of roofs very clearly by having a series of wall-niches in the shape of stepped triangles with fragments of wooden beams along the wall.

Small windows were also recorded in the structures of this period. Three wells were also found. They are simple circular pits excavated into virgin soil and were located in a courtyard surrounded by structures like those in Period II. An oven is also located.

A new feature of this period is the use of a central pillar of fired bricks within a room of phase III.3. Another feature is the construction of a retaining terrace well to the south-west, made of large blocks of fired clay, and the area behind the wall then filled.

Burials have been located within the house or outside. The typical grave had a large pit, constructed with fired bricks. It was a small tomb containing a single individual.

Period III had only a few structures, all of which seemed to centre on a single row of rooms.

*Ceramics* : Period III represents a continuous development from the previous period. It contains some striking new ceramic styles. Wheel-turned pottery became prominent (85%) but handmade pottery never disappeared from Mundigak. The buff ware and the vessel types in it remained unchanged : large mouthed straight sided globular jars and straight angular walled bowls. Wheel-turned pottery has been both decorated and plain. Globular jars with simple everted rims and collared jars appear initially in Period III.5,6. A small quantity of straight sided beakers was also manufactured.

Decorated pottery has two types, one has thin white translucent wash and the other's surface is coated with a cream buff opaque wash. There is a higher frequency of ring and pedestal based bowls amongst decorated pottery. Black or red motifs are almost exclusively geometric until phase III.6 when what appears to be plant motifs are identified as *pipal* leaves/ a stylized leaf. The other common motifs were festoons, vertical zig-zag lines, horizontal zig-zag lines, open panels formed by multiple lines and, more rarely, stepped triangles and unaligned stars. *Fig. 3.1* *Fig. 3.1A*

Significantly, the so-called Quetta Ware has been found in this period along with all its typical characteristics. It is comparable to various Turkmenian and Iranian examples. Amri style bichromes are found in small quantities throughout Period III. Of particular importance was the location of a double rim white slipped Amri vessel in phase III.4. Also found in phase III.4 were potsherds decorated in Amri or Nal bi-or polychrome style. Another potsherd is found decorated with pipal leaf motif in Faiz Mohammad style. Several sherds from a vessel with a large horizontal brown band near the rim resembles closely the Kot Dijian pottery from the Indus Valley.

Thus Period III shows a variety of potteries, some of which are typical to Mundigak.

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While some of them continued from earlier periods others were imported from outside.

*Lithic artefacts* : The main lithic artefacts remained unchanged through different periods. Stones with a long axis groove appear in phase III.4 and increased in later periods. In phases 5 and 6, microlithic blades are introduced in quantity and then continued through the remaining periods of occupation.

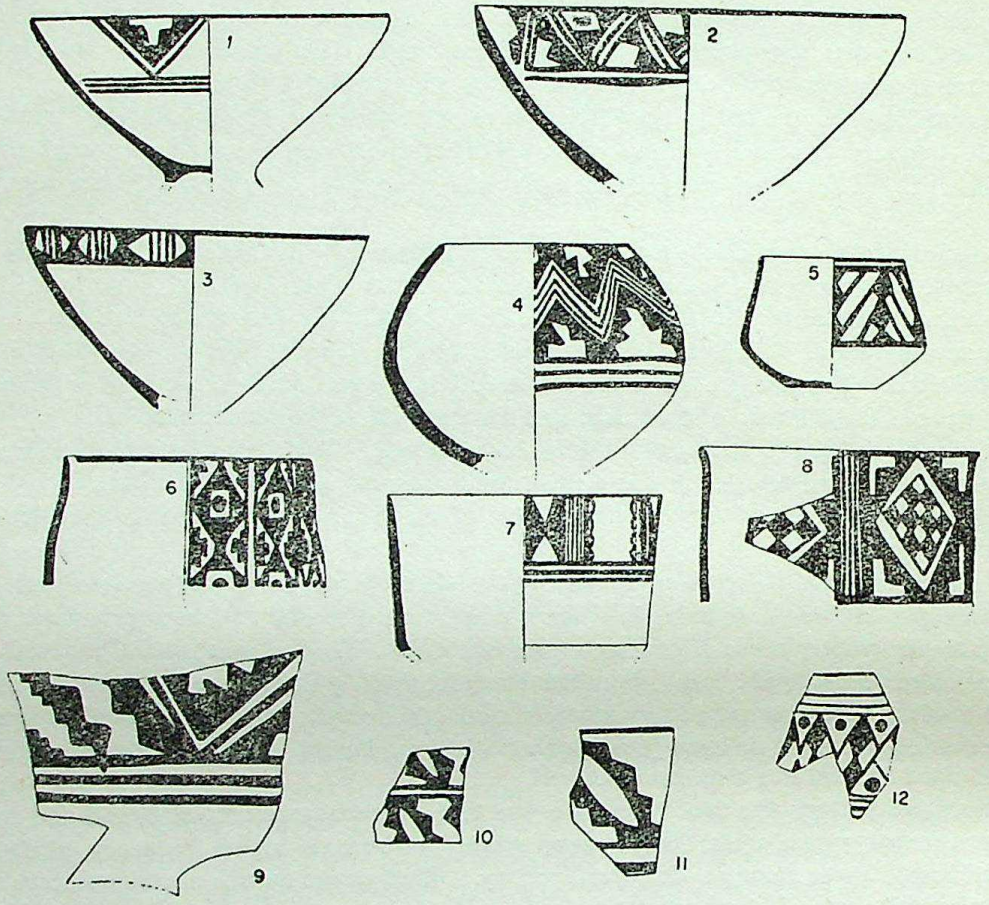


Fig. 3.1. Mundigak III: Painted pottery, Quetta style.

Bifacially flaked extremely large flint points have been found in phase III.6. Bone spatula and awls or punches have been frequently found in Period III.

Technological activities increased, tanged lozenge shaped point was located along with luxury items, e.g. copper pins with flat ends and twisted shafts. Utilitarian objects like small curved knives or sickles and chisels have also been recorded. Besides these, two socketed axes and one adze were the important metal objects.

Of the artefacts analysis from Period III, only the axes and adze had a composition approaching that is usually associated with low grade bronze. These artefacts had a tin content of nearly 5 per cent, the highest recorded at Mundigak. Other artefacts had lower tin content. By Period III, the differential characteristics of various alloying compositions had

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been clearly understood by the smiths, the metallurgy was led into a new phase of sophistication and specialization.

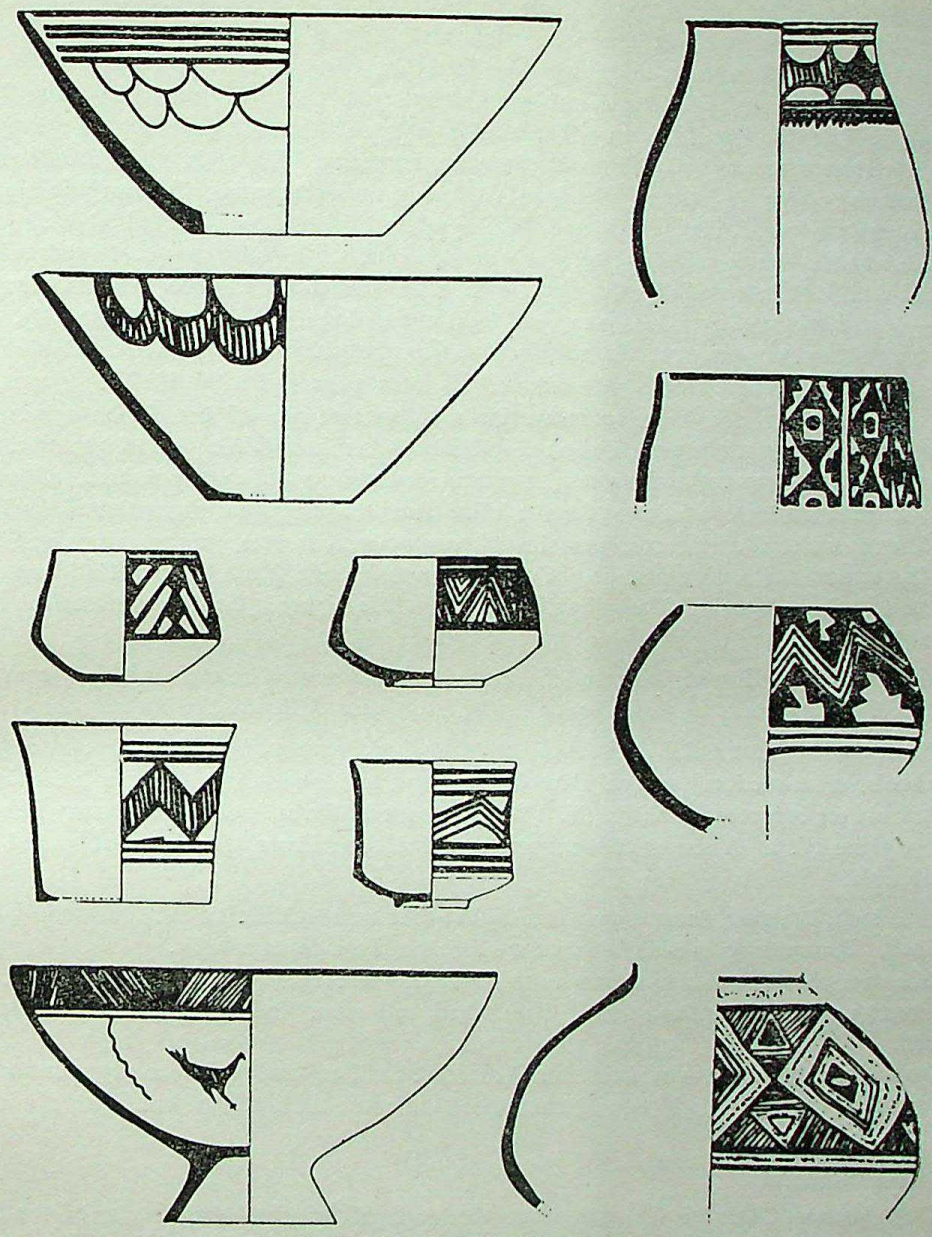

Fig. 3.1A. Mundigak III: Painted pottery.

*Spindle whorls* : The types of spindle whorls prevalent in Periods I and II were changed in Period III. Conical types are found replaced by disc shaped whorls, both of terracotta and steatite.

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**Period IV**

Period IV demonstrates both continuity and change from the preceding period at Mundigak. Period IV is thus characterised by monumental structures—the place with a long series of half colonnades along the fortification wall and the temple with a series of rooms, enclosed by huge walls with bastions at regular intervals.

The pottery repertoir of this period is marked by several changes in earthen vessel forms and designs, introduction of a new red paste for pots and the disappearance of the Quetta ware. Handmade pottery was still present in some frequency. However, plain and decorated wheel-thrown pottery underwent significant changes in vessel forms. Zoomorphic motifs—horned caprids (ibex), felines, birds and fish depicted in solid or hatched style in wide horizontal bands—were painted extensively on the vessels. Equally frequent were solid or hatched floral motifs, especially the *pipal* leaf. The vessels were decorated with geometric motifs—combinations of parallel zig-zag and tight undulating lines executed diagonally. The remaining pottery witnesses generic relationship with that in previous periods. Red slipped ware decorated with black motifs got increased in later phases, Period IV.2-3. Phase IV.1 had several examples of a large collarless jar with everted rim of Kot Dijian type. Faiz Mohammad painted pottery was also found in Period IV, although in a limited quantity.

In this period terracotta figurines have been found in significant numbers. These are mostly female figurines, except one of male. The female figurines are characterized by highly stylized forms with pinched faces, prominent breasts applique eyes, winged arms and broad hips. These are in standing posture. Curiously enough, two Zhob Mother Goddesses were also found in these deposits. The animal figurines include highly stylized representations of the humped bull/cow.

There was a significant increase in seals. In seals several new geometric shapes were introduced. Metal seals were also found in the last phases of Period IV, but very rarely.

The most frequent metal artifact of the Mundigak sequence is a bronze point or punch with circular cross-section. An oval shaped tanged point, a large lance head, a knife, sickles and chisels were reported in Period IV. The greatest number and variety of luxury items was found in phase IV. 1. These include mirrors, handles for mirrors, double spiral headed pins and a buckle.

Bone awls, however, became very rare by the time we reach Period IV. But bone spatulas continued. Rare examples of bone tubes are found in Periods III and IV.

Stone vessels were also recorded in this Period. Beads of lapis lazuli, carnelian, shell and bronze were found in Period IV. One etched cannelian bead with figure 8 has also been reported.

No radiocarbon date is available for Period IV. Still, cultural evidance suggests that Late Mundigak III-6 and IV might have encompassed the entire third millennium.

**Deh Morasi Ghundai**

Deh Morasi Ghundai is located on the edge of the great desert region of south-west Afghanistan. The Dori river forms the boundary between the foothills of Kandahar Province and the Registan desert zone. It is a small mound and was excavated by Dupree (1963) on a limited scale. Three small test-pits and a sondage were laid on the mound. Four major occupational periods have been worked out.

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| | | |
|---|---|---|
| Period IV | | ...Islamic |
| Period III<br>Period II<br>Period I | | These three periods, in fact sub-periods, are prehistoric in nature and were contemporary to Mundigak IV-1. All of them belong to a single major period. |

Due to limited excavation, it is difficult to provide the details of architectural remains. Mostly, the stratigraphic observations have been made on the basis of the cultural milieu recovered from different levels.

**Period I**

Period I is devoid of architectural remains. It yielded only a few stone and pottery artefacts.

**Period II**

Perod II represents the major occupational period. It has been divided into three phases—IIA to IIC (Dupree 1963:119). Period II yielded a small (45×28 cm) mud-brick structure, trapezoidal in shape and containing various types of objects such as ceramic female figurines, seals, copper tubes, utilized magnetite nodules and pottery as well as bones of goats and fragments of horn. Dupree considers it as a 'household shrine'. The entire structure was surrounded by a prepared clay floor.

In Period IIB a semicircular mud-brick oven associated with a prepared floor and a section of mud-brick wall was traced out. Period IIC revealed a series of successive living-surfaces and cultural fill.

**Period III**

This period has been described as a unit of unstratified mound-fill, the major feature is three burials of a later date.

*Ceramics*: Period I yielded only crude handmade chaff-tempered pottery. The ceramics found in later periods have their parallels at Mundigak VI. The pottery is characterized by wheel-turned ware of buff-red paste with sand or self temper. The major shapes included bowls, S-shaped beaker vessels, pedestal based beakers, etc. All these have frequently occurred in Mundigak IV. The designs, generally geometric, are painted in black on red surface or on a thin buff white-wash. The Quetta Ware in linear style and a few examples of the curvilinear or floral designs did find its way in the pottery assemblage of this site. A zoomorphic motif was also found in Quetta Ware in Morasi II B.

*Lithic industry*: Stone objects are comparatively very few in number. These are recovered from Periods I and II. Milling stones, pestles, hoes, celts and retouched blades are reported. Two fragments of simple angular walled alabaster bowls were, however, also noticed in Period II.

*Bone artefacts*: Period II B-C yielded only a few bone implements particularly in the form of simple punches or awls and a scraper. An elongated bone pendant and a disc bone bead were also recovered from Period II deposits.

*Terracotta figurines*: There are a few animal figurines which were confined to a leg fragment in Period II B and a bird figurine in II C. The Zhob mother goddess, on the other

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hand, has been reported from the shrine complex of Priod II A and another from Period IV. Period II C has also yielded a fragment of a seated figurine.

*Seals*: So far only three fragmentary compartmented seals, bearing geometric motifs, have been found. Two seals, made of steatite, are reported from Period II and one of copper comes from Period IV deposits.

*Fauna and Flora*: As far as faunal remains of this site are concerned, they have never been properly analysed. However, Dupree reports that sheep/goat and large bovid bones have been unearthed from Period II deposits.

The plant remains have been studied by Chowdhury (Dupree 1963: 126-31). The shrine complex of Period II A yielded a brick containing seed remains of a fodder grass (*Aegilops tauschii syn A squaorrse*) related to wheat and domesticated six row barley (*Hordeum vulgare var afghana*).

A single radiocarbon date of 3200 B.C. with MASCA correction, is available for Period II B. However, it is difficult to evaluate the chronology of the whole deposit on the basis of this single early date. The whole cultural sequence may be equated with Period IV of Mundigak.

**Said Qala Tepe**

Said Qala Tepe is situated in Sarawan, on an alluvial plain, 100 km south-east of Mundigak, near Kandahar city. The site measures 200 m in diameter and 8 m in elevation. In 1952 the site was explored for the first time by Fairservis (1952) but was excavated by Shaffer in 1971-72 (Shaffer 1978 a & b). The cultural sequence is as follows :

| | | |
|---|---|---|
| Period VI | | —Modern surface |
| Period V | | —Cemetery of the early centuries of the Christian era |
| Period IV | | |
| Period III | | These occupations correspond |
| Period II | | to Mundigak $III_5$—$IV_1$ |
| Period I | | |

Here we are mainly concerned with the prehistoric occupation : Period I to Period III.

**Period I**

It is represented in the 3 m of lowest deposit. Some simple rectangular mud-brick structures were made during this period,

The material assemblage is represented by handmade and wheel-turned potteries, stone tools, bone artefacts and terracotta figurines.

**Period II**

The most noteworthy discovery of this period was the recovery of a large mud-brick wall. However, its function could not be ascertained. The other structures include two large trapezoidal mud- brick structures with lateral entrances, separated by a large open space from a series of small rectangular room-like structures with a large rectangular interior mud-brick oven against the wall. The cultural repertoir of Period I continued in this period, but along with a few additions, such as bronze artefacts, stone vessels, beads of semi-precious stones and seals.

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**Period III**

Four phases of occupation (phase III A to III D) have been brought to light in this period. The first three phases demonstrate continuous building and rebuilding of small rectangular mud-brick structures. The walls were made with single and doubl coursed mud-bricks and only rarely entrances to them have been located. Interior oven and simple clay-lined fire pits have been recovered in several structures. A series of small mud-brick and pise structures, probably used as stores or work-areas, has been located in phase III D. But these are not related to any habitational structure. The cultural milieu, in any case, is the same as of Period II. This area was not occupied after this.

**Period IV**

Period IV is not an occupational level. Probably, around the site, the area was used as a cemetery; the grave cuts contain extensive prehistoric ceramics and other objects.

Period V belongs to the cemetery used by Kushano-Sassanian group, and Period VI is the modern surface of the mound.

At least three radiocarbon dates are available. The MASCA corrected dates are: Period I=2110 B.C.; Period II=2160 B.C. and Period III=2230 B.C. However, as these dates put the whole occupation at the end of the third millennium B.C., they are doubtful. On the basis of cultural material of this site the life-span of the site can safely be equated to Mundigak Period $III_{5\text{-}6}$-$IV_1$ which comes to early third millennium B.C.

*Ceramics* : Both the handmade and wheel-turned pottery traditions existed here. The pottery is mainly characterized by buff red in colour, occasionally self or sand tempered. The major pottery forms include large mouthed, straight sided globular jars, globular jars with everted rim, collared jars, beakers, pedestal based bowls, straight angular walled bowls. Mundigak III provides parallels for this pottery assemblage. However, the painted designs in comparison to Mundigak III are limited. The most frequent type of handmade pottery had basket impressed surface. However, it is rarely found in Period II. A few sherds of Quetta Ware, Kile Gul black-on-red and Faiz Mohammad Grey Ware have been reported from Period I.

In Period II there was no change in vessel shapes although designs increased, in variety and quantum. Almost all Mundigak III pottery motifs are present here. A few new types which were introduced in this period are Quetta Wet Ware, Kechi Beg White-on-dark slip; Kechi Beg Polychrome/Bichrome, Amri Polychrome, Nal and a few sherds similarto Gumla III polychrome pottery. However, they are just a few in number. Quetta Ware and Faiz Mohammad Grey Ware continued.

**Period III-IV**

The percentage of handmade pottery got reduced in these periods. The pottery shapes also changed a little. Bowls change from angular wall to an 'S' shaped wall form, beakers from a parallel wall to an 'S' shaped wall. Globular jars with collars were commonly used. A few stemmed vessel forms occurred. Similar geometric motifs were favoured by the potters of Said Qala III-IV as well as Mundigak $III_5$—$IV_1$. While floral motifs did secure a place in the set of painted motifs, the zoomorphic motifs did not. Quetta Ware motifs, prevalent in Mundigak $III_{5\text{-}6}$, were used extensively at Said Qala. A single potsherd of Nal Polychrome is reported in this period.

On the whole, the ceramics at Said Qala support the ascription of all prehistoric occupations at the site as being contemporary with those of Mundigak $III_{5\text{-}6}$-$IV_1$.

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*Lithic artefacts*: Lithic industry was also similar to that flourishing at Mundigak. Milling and hand-stones were used throughout the sequence. Similarly, the large cortex flakes with one or more retouched edges, probably used as knives or scrapers, were reported from all the occupational levels. Seven blade fragments have been found in habitation areas (Period II-IV). Large trapezoidal-triangular hoes made out of large cortex flakes of basaltic material, showing extensive retouching on edge, have been noticed throughout the sequence. A cleaver has been found in habitational area.

These lithic artefacts, though not frequent, were reported from all prehistoric periods. These were bifacially retouched to a blunt crushing edge and were not hafted.

Bone tools have been found constantly used from Period I to Period IV as evidenced by the discovery of simple points and awl fragments.

*Metal artefacts*: Bronze artefacts are reported from the end of Period II to Period IV. They included sickle blade fragments, a lanceolate or lozenge tanged point with circular cross-section. Pins were also recovered from Period II to Period IV. The most noteworthy example of the luxury item is pin with double spiral heads. The other pins are very fragmentary. However, the significant types have been determined: flattened with forked end, a simple forked end with twisted shaft. Fragment of a bronze handle has also been found.

*Ornaments*: Beads of semi-precious stones are reported from the habitational levels (II-IV), though in limited quantity. The types are marked by simple discs, cylindrical, biconical and circular shapes. The beads were made of steatite, alabaster, marble, carnelian, rock crystal, lapis lazuli and terracotta. Pendants are rarely found; two rectangular pendants of alabaster and bone and one oval with serrated edges of turquoise.

*Terracotta figurines*: Animal figurines, representing bull or cow, were noticed throughout the sequence. A single example of bird is also reported. Human figurines have come from Period II. All of them are fragmentary, preserved only in the form of lower torso. Except one standing male figurine, all of them are females. The figurines are very similar to those found at Gumla II and Namazga III.

*Seals* : Several steatite compartmented geometric seals occurred within the habitation area. Three of them are made of bone and one from grey silicious stone. Normally, they are rectangular or square in shape but occasionally circular, triangular, lozenge and oval in shape also. All had two central perforations. Several worked steatite blank pieces were also unearthed, they were probably meant for making the seals. This attests the local working for seal manufacture.

*Stone vessels*: Several fragments of straight angular walled bowls made from alabaster were discovered in Periods II to IV. A truncated cone shaped ceramic spindle whorl with central perforation was found throughout the sequence.

So far the faunal and floral remains have not been examined. However, the excavator believes that the Said Qala people were exploiting domesticated sheep, goat and cattle as well as domesticated wheat and barley.

**Rehman Dheri**

Since 1976, the University of Peshawar under F.A. Durrani (1981 : 133-37) is digging at Rehman Dheri, located about 23 km north of Dera Ismail Khan. Fig. 2.23. The Gomal plains, where the site lies, has a subtropical continental, arid and semi-arid climate. Due to low rainfall and high evaporation, the natural vegetation is very scanty. The plain is traversed by numerous torrents and at places the relief is undulating due to sandy deposits (Said 1972). The

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'Rud Kuhi system' played an important role in irrigation system.

Two perennial mountainous streams-Mir Sahib Nala and Takwara—flow on either side of Rehman Dheri. Field survey reports that a branch of the Indus once passed only 5 km of Rehman Dheri.

The mound measures 1800×1300 ft. It is not very high although at places it rises to the height of 20 ft. from the surrounding plain. Aerial survey has pointed out the emergence of town-planning or regimented pattern, and the fortification.

Four Areas—A, B, C & D—were selected for the probe. A—in the south-western portion from the highest point to the edge of the mound ; B—in the middle of the southern half; C—across the main street, and D—at the highest point in the northern half. All the areas yielded identical cultural sequence. The maximum depth of the occupational deposit is 20 ft.

The cultural sequence can be divided in the following manner :

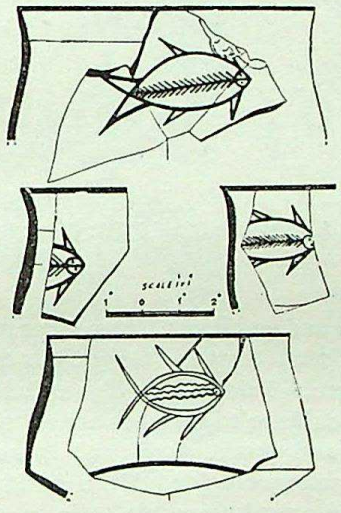

Fig. 3.2. Rehman Dheri I: Painted pottery.

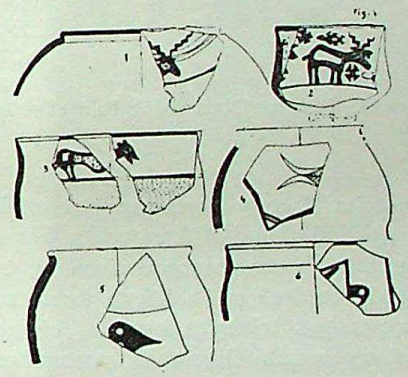

Fig. 3.3. Rehman Dheri II-III: Painted pottery.

1. Rehman Dheri I : Lowest—Proto-Kot Dijian—some Kot Diji elements occur in slightly varied forms. The bulk of assemblage is non-Kot Dijian. *Fig. 3.2*
2. Rehman Dheri II : Intermediate—Kot Dijian pottery with some typical designs of Mature Harappan phase, like *pipal* leaf, peacock, intersecting circles. *Fig. 3.3,4,5*
3. Rehman Dheri III : Uppermost—Evolved Kot Dijian elements with more Harappan elements.

*Area A* : Round pits with mud walls containing quantities of burnt wheat, barley and other grains, besides ash and charcoal, were reported in the earliest phase of Area A. The possible fortification wall, built of dressed mud slabs, was traced upto 18.29 m in this area and was also attested at a few points around the site.

*Area B* : Remains of a large number of round furnaces were noticed in this area. Structures consisted of mud-platforms and mud-brick houses of square or rectangular shape.

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*Area C* : The main street exposed in Area C was about 10.67 m in length.
*Area D*: The excavator has not given any details for this area.

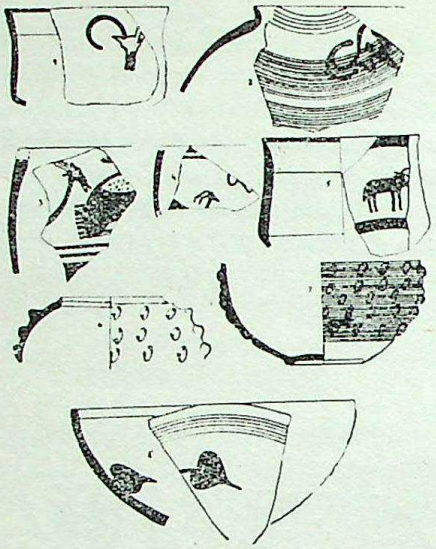

Fig. 3.4. Rehman Dheri II-III: Painted pottery.

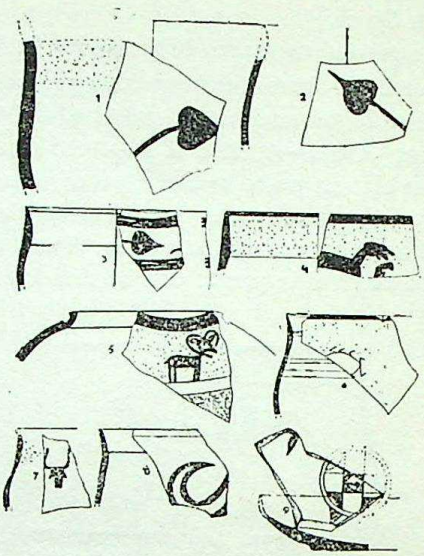

Fig. 3.5. Rehman Dheri II-III: Painted pottery.

*Ceramics*: Pottery assemblage consisted of red, buff and grey wares. These wares are wheel-turned, well baked and of fine quality. The ceramics included storage jars of various categories, cooking pots, plates, saucers, drinking cups, lids, etc., Painted motifs included linear (horizontal, vertical and oblique lines, and single, double or triple bands across the body), geometric designs (triangles, squares, circles, lozenges and cross), floral and faunal motifs. This pottery recalls Gumla II assemblage. RHD I pottery consisted of fine drinking cups, vases, dishes, jars, etc., of thin variety, decorated with linear and geometric designs as well as plants, animals, birds and fish motifs. Depiction of fish has a prominent place amongst the painted mofits—fish was depicted in black outline and white filling executed in exuberant style. Sometimes fish is depicted along with three wavy lines which probably represent water.

*Fig. 3.2*

The excavator has so far not given any details for the pottery of Period II. However, he mentions the appearance of knobbed ware in late Period, probably in RHD III. He suggests the indigenous evolution for knobbed ware.

*Stone objects*: A variety of stone tools, such as lunates, leaf-shaped points of arrow-heads, saws, scrapers, burins, blades and axes (Farid Khan 1979) were reported from Rehman Dheri. Blades from the upper levels recall parallel sided chert blades of the Harappans. Significantly, one drill was found intact in an unfinished carnelian bead. A number of unfinished beads in lapis lazuli, turquoise, carnelian, agate and the lumps of raw material reveal the evidence of its being a manufacturing centre. Durrani feels that this site had served as a major trade-centre for the Gomal plain.

*Fig. 3.6*

The unique discovery of this site is an ivory seal from the earliest level This is almost square in shape measuring 3 X 2.7 X .02 cm. The seal is carved on both sides

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showing two mountain goats and a symbol of T, I and ↑ and two scorpions, a frog and a T symbol on the other side. According to Durrani, the symbols are the same which were used for Harappan writing. According to him, this shows that the very idea of having animals along with symbols emerged a long time back before the mature Harappan phase

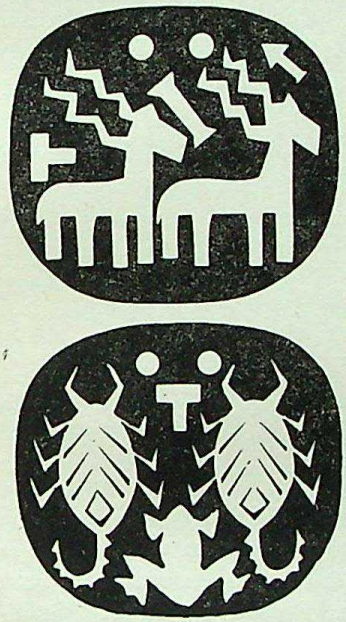

Fig. 3.6. Rehman Dheri: Ivory seal.

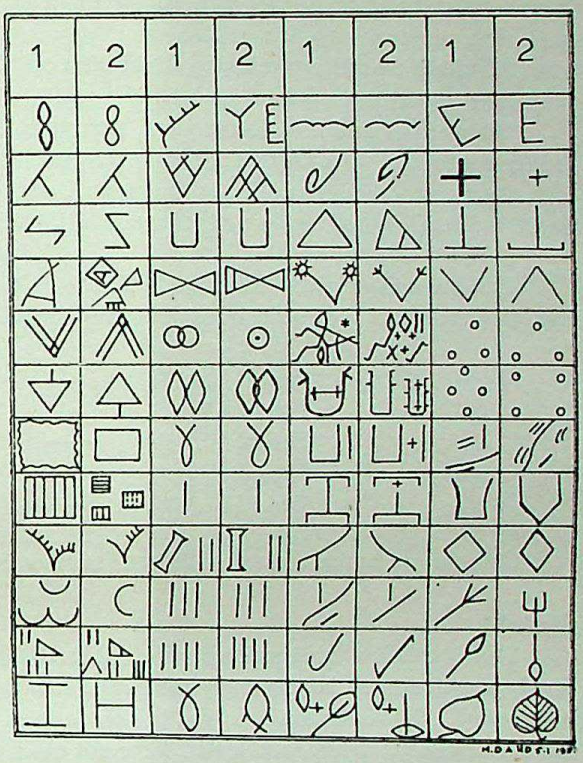


Fig. 3.7. Comparative Chart of graffiti marks on pottery (1) Rehman Dheri (2) Harappan characters.

*Fig. 3.7*

It also shows the continuity of this idea. A number of such symbols occurred on the pottery also. They are similar to the potter's marks of Kot Diji, Sarai Khola, Kalibangan, Jalilpur, Amri, etc. Durrani takes them as the base for Harappan writing.

Rehman Dheri clearly shows that this is a protourban site of the fourth millennium B.C. which has its initial settlement in 3500 B.C. when Amri and Kot Diji settlement appeared in Sind. There are a few radiocarbon dates for Rehman Dheri.

RHD III (Kot Diji 2480 B.C.—PRL 673; Layer 5)
RHD II (Kot Diji 2600 B.C.—PRL 674; Layer 10)
RHD I (Pre-Kot Diji 3250—3340 B.C.—PRL 676; Layer 6)

**Gumla**

The site is named after the neighbouring village of Gumla that lies to its north although it stands in between this village and Garhi Hayat on the south. The mound is situated a few

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metres away from the main road on its northern side between the seventh and eighth milestones from Dera Ismail Khan. Between this site and the village of Gomla Kalan, about three km to the north-east, there is a dried-up river bed, probably an effluent of the river Indus that now flows 5 km. from the site. It appears that the original site of Gumla stood not far from a river bed but its very size suggests that Gumla was a small village occupation. Dani feels that the main city site of Rehman Dheri is hardly 8 km to north-north-west; it is clear that this site is a rural extension of the urban centre.

The main mound is almost square, measuring 60.94 m each side, with a 9.14 m extension on the south and a further 21.34 m extension on the north. Thus the north-south axis actually measures 91.44 m. Today the mound, cut up by the rain and the gullies, has been made at four diagonal corners where much of the cultural deposit has been washed away.

The excavations were conducted (Dani 1970-71) by the Peshawar University under the direction of Dani. The sequence of cultures is as follows :

| | | |
|---|---|---|
| Period V & VI | — | Later occupation |
| Period IV | — | Harappan |
| Period III | — | Kot Dijian |
| Period II | — | Chaloclithic |
| Period I | — | Pre-ceramic |

Here we are concerned with the first four periods only.

**Period I**

This is the first occupation stratum, directly above virgin soil. The occupation was on a sandy clay deposit. No structure and regular habitational remains have been encountered in this period. But community ovens, in the form of large pits with ash and charcoal, have been found. Pottery remains and metal have not been noticed so far. Stone tools are very significant and they indicate the life-style of these people. Stone tools included microliths, saddle querns, rubbing stones, stone balls and pestles. The saddle querns recall the saddle querns of Mundigak and Quetta. The microliths include parallel sided blades, awls, scrapers of different shapes, burins and one tranchet. Animal bones were also reported. All this shows that these people were dependent primarily on hunting and they had none of the tools needed to cultivate food.

**Period II**

Period II witnessed the remains of an advanced cultural complex with very fine painted wheel-turned pottery along with other plain pottery, bronze tools, new types of microliths, bone tools, terracotta figurines, wheels, bangles and gamesmen. Handmade pottery was almost negligible. These were new people to this area with a highly developed culture. They used bronze and definitely practised agriculture as is evident from the occurrence of storage jars and sickle blades. The remains of this period relate it with Mundigak III, RG II-IIIa and Sur Jangal II. Structural remains are not reported in the excavations. Four oven-pits have also been unearthed. Only one bronze antimony rod has been found. Bone tools included awls, points and spatula. They are similar to the bone tools of Mundigak and the Quetta

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valley. Stone objects included saddle querns, pestles, an anvil base, a stone pounder, a skin-scrubber and microliths made of chert and flint. A long thin blade is seen here for the first time. Terracotta bangles and a bead of white stone were noticed.

The terracotta figurines throw signigcant light on the religious beliefs of the people. One of them is very important as it has some specific ritual significance. The main figure is missing but its feet are preserved on a rectangular base. Another example is beautiful in the sensuous curve of its hips and legs. The ten specimens of terracotta bulls show two varieties—short horned bulls and humped bulls. Terracotta animal figurines include the bull, the dog, and birds. Some bird whistles have also been noticed. **Pl. 2**

The pottery assemblage has very fine varieties of wheel-turned plain and painted pottery. The plain pottery includes large strorage jars, cooking pots, drinking vessels and water vases. Some pot-sherds are from 'Wet Ware'. Almost all the pots have slips either red or of varying density in white or buff. The red slip is dominant.

The painted motifs included animals like the lion and ass, birds and geometrical designs, usually painted in deep chocolate on white or buff background. The vessels are generally thin bowls with simple ring bases.

The geometrical designs recall Namazga III. Mundigak III and DS II-III, and clearly reveal Turkmenian influence. *Fig. 3.8*

Only one flanged rim vessel is reported from this period. Pottery types include the dish-on-stand, fiat bottomed dish, painted dishes, painted troughs and funnels, painted shallow bowls, scored pottery (thin ware bowls), painted narrow mouthed vessels, vessels with appliqueg clay bands, incised ware vessels, jars with painted neck-bands, jars with flanged r ims, etc.

**Period III**

It seems that there was a temporary break between Period II and Period III as the lowest layer in Period III yielded practically nothing. Some structural remains of mud-bricks (walls) were encountered in this period. It was not possible to draw up the full plan of any house. The size of the mud-bricks was $11 \times 5 \times 2\frac{3}{4}$ inches. This size is maintained in Period IV also. The other remains included bronze objects—antimony rods and nail parers, a jasper barrel-shaped bead, terracotta bangles, shell bangles (appeared for the first time), stone tools-saddle querns, grinders, stone balls, a flat stone sharpener, different types of microliths the long thin blade lost its utility and parallel sided blades and scrapers of flint predominate. Terracotta human figurines have different features. The Period II figurines disappeared and, instead, the mechanically produced lower part of the body, flat and bent at the right angles, emerged. One has a rolled stem like body. The appearance of this new type of female figurine coincides with a horned deity painted on a pot-sherd. Dani identified this with the snake and felt that, for the first time, evidence shows the snake god. Terracotta bulls, both the short horned and humped, were reported. Terracotta birds, most probably peacoks, are usually found in this period. Tiny ritual saucers or trays and pots are very common.

The pottery of this period heralds a new era. The thin bowls and cups of Period II were replaced by rimmed bowls and other vases with broad reddish or chocolate painted or deep slip bands at the neck—the so-called Kot Dijian type. The flanged rim vessel became more popular. The painting on the body of these pots below the rim became dull and lifeless though older tradition of chocolate-on-white or buff continued in this period. The black-on-red became more popular along with several new decorative motifs.

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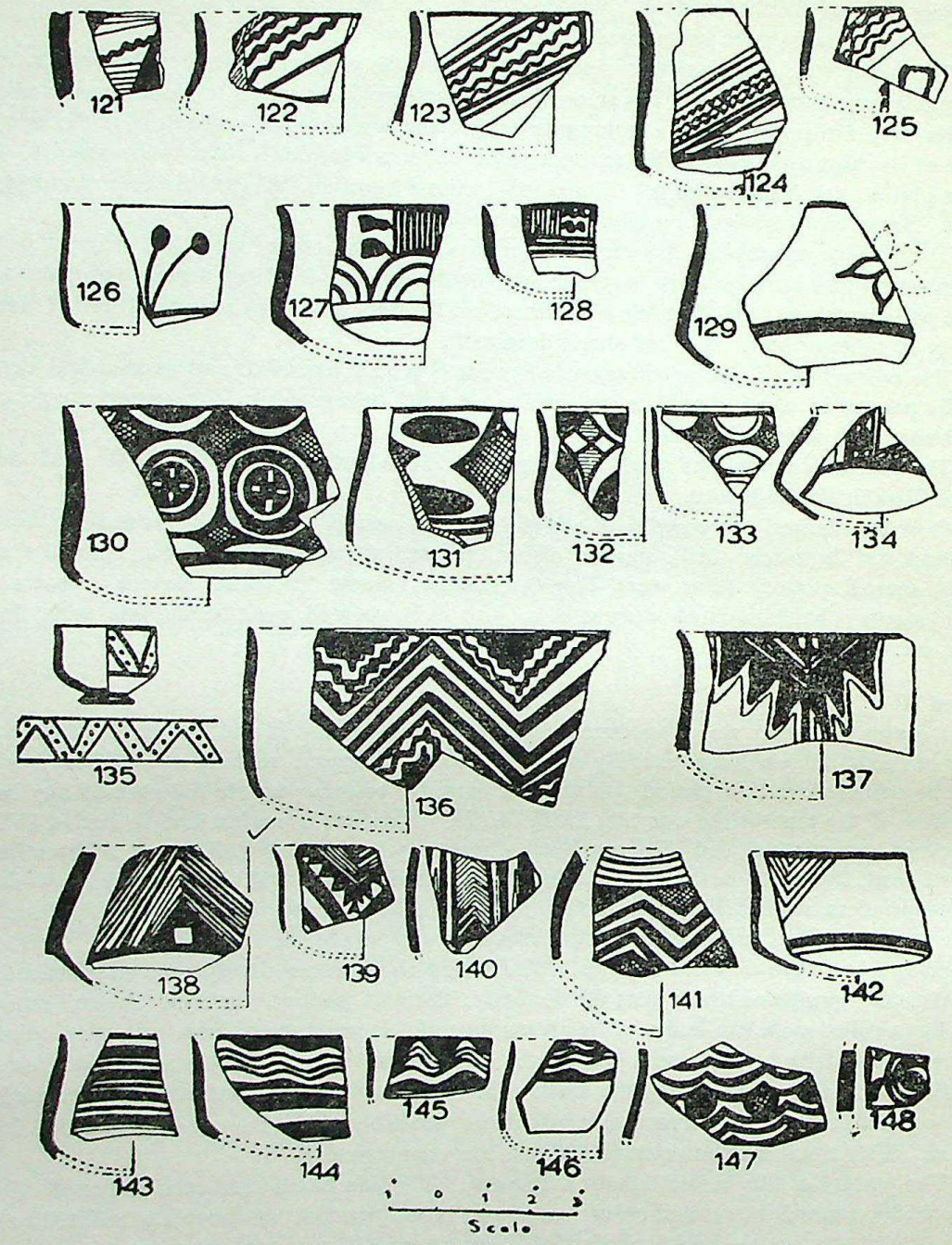


Fig. 3.8. Gumla II: Painted pottery.

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Pottery included dishes-on-stand, the flat bottomed dish, plates painted with simple lines, lids with variegated designs, painted shallow bowls or saucers, scored pottery, incised pottery, narrow mouthed vessels and cups, jars with painted neck bands, a flanged rim vase, painted cups, etc.

The pot forms, the broad painted bands below the simple rims of the pots, the general character of the objects found, together with the horned deity with a face identical to the one seen on Kot Diji pots, clearly suggest that here we have the cultural complex coeval with Kot Dijian culture.

**Period IV**

The end of Period IV appears to be violent. There is a thick layer of ash, charcoal, bones, pot-sherds, etc., all of which belong to Period III. However, there does not seem to be any gap between Periods III and IV. The cultural tradition continued witnessing the introduction of some external cultural elements too. The mud-brick walls associated with floors and hearths are encountered in Period IV-a and a unique construction of a huge podium of mud-bricks was found in IV-b. The older walls were raised. The arrival of these new people is also evident in the material remains. The older elements were felt increasingly less, and the influence of a new people spread all over. In this period, ceramic assemblage bears Harappan pottery characteristics. Other antiquities, like the toy cart, wheels, terracotta missiles, triangular cakes, etched carnelian beads, cubical weights, all recall Harappan material. This cultural deposit shows that the Harappans had reached this site.

Period I is a non-ceramic stage that may be linked with Mehargarh I and KGM I. Period II can be termed, in Mughal's vocabulary, the Pre-Early Harappan phase, and Period III is equated with Early Harappan of the so-called Kot Dijian. Period IV reveals evidence of the Muture Harappan culture.

**Lewan Dar Dariz**

The site of Lewan is situated 23 km south of Bannu city between the Tochi and Lewra rivers. The site was excavated in 1977-78 by a joint expedition of Peshawar and Cambridge universities (Durrani 1981: 133-134; Allchin & Knox 1981 : 241-244 ; Allchin 1982: 151-152). It represents the Kot Dijian occupation. Its lithic industry was characterized by perforated ring stones, axes, hammer-stones, grinders and lunates, leaf-shaped arrowheads or points, burnis, scrapers, bead drills and blades, etc. Numerous types of beads, including those of turquoise and laips lazuli, were found at the site.

Lewan has not yielded any structure. However, several pits in round, rectangular and irregular shapes, full of broken pottery, ash, charcoal, animal bones and other garbage, have come to light. Some of these pits contained large tub or basin like storage jars.

The pottery repertoire consists of red and buff wares with red slip and black, chocolate, dark brown and white paintings. Two pots are worth special attention : one, a dish-on-stand in dark red or chocolate colour with black bands, painted with a row of fish in black outline with white filling, and the second, a bowl in red, painted with the motifs of mountain goats, bulls, buffalo heads with *pipal* leaves sprouting out between horns. The ceramic assemblage belongs to Kot Dijian complex. Terracotta figurings of this site are similar to Rehman Dheri figurines. *Fig. 3.9* *Fig. 3.9A*

The site seems to represent an industrial area of a developed village.

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**Tarakai Qila**

The site of Tarakai Qila is situated just a few kilometers south-west of Bannu on the edge of river Tochi. The location of the site is very important as it guards one of the entrances

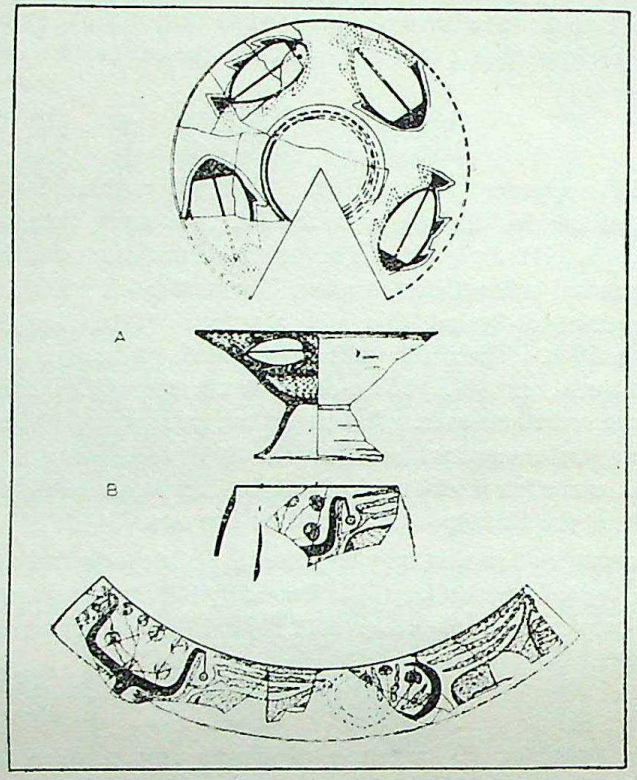


Fig. 3.9. Lewan: Painted pottery.

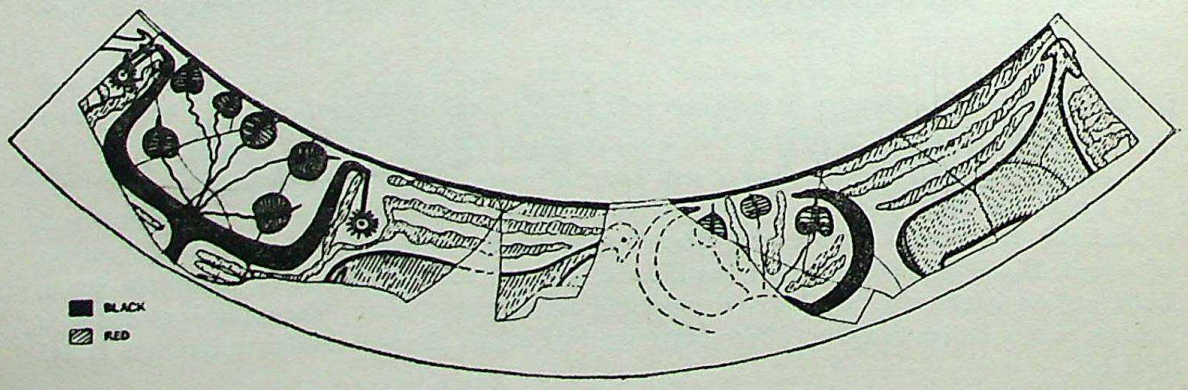


Fig. 3.9A. Lewan: Paieted pottery.

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to Waziristan. The excavations were carried out at the site in 1978-79 by the Peshawar-Cambridge team on a limited scale (Durrani 1981 : 134; Allchin & Knox 1981 : 245-250; Allchin 1982 : 152-153). Here, unlike Lewan, stone and mud-brick structures were encountered.

There is some indication of a defensive wall at the eastern edge of the settlement. Excavators have, however, so far not given the details of the ceramics and other artefacts. They only say that the pottery, stone tools, blades, etc. were similar to those found at Lewan and Rehman Dheri, i.e. Kot Dijian. A round seal with geometric design has been found at the site. The site has yielded the information regarding the agriculture. Several varieties of wheat and barley, lentils (*Lens culinaris*) and a pea (*Pisum arverse*) have been reported from this site.

Bones of domesticated cattle, sheep and goat and of wild water buffalo have been unearthed at the site in large numbers. This site, therefore, also represents developed village settlement.

**Sarai Khola**

The discovery of Sarai Khola has extended the history, in time, of the Gandhara region. Before its discovery, it was believed that this area had no prehistoric settlements.

The mound of Sarai Khola lies half a km west of Kala Nala bridge on the Grand Trunk Road and about 2.5 km south-west of the Bhir mound, the earlier city site of Taxila. The mound which rises in four successive terraces is 516.25m above sea level. The axis of the site measures 609.6 m north-south and 304.8 m east-west. Excavations conducted from 1964 to 1972 have revealed four main periods. (Halim 1968 : 28-40; 1970-71 : 23-89).

| | | |
|---|---|---|
| Period IV | — | Early Medieval |
| Period III | — | Cemetery—People using iron |
| Period II | — | Kot Dijian |
| Period I | — | Late Neolithic |

Only Periods I-II are relevant to our study.

**Period I**

Excavations have yielded the remains of the Late Neolithic in lower levels. The site was inhabited by a group of late Neolithic people for the first time and they continued living there till the Kot Dijians arrived, and finally they submerged.

No structural remains have been encountered in Period I levels. It appears that the people lived in dwellings made of perishable material.

The neolithic level is characterized by stone celts with a sharp polished cutting edge, long, thin parallel-sided flint blades, bone points, chert and flint microliths, a chisel, high burnished brown pottery and terracotta figurines. **Pl. 3**

Burnished pottery appears for the first time. It is wheel-turned and prepared of well levigated clay of thick and medium texture. It includes thick pans and medium fabric bowls with slightly flared sides. The bowl base is flat with notches around the base ring and a mat-like impression on the bottom. The material remains are similar to the Neolithic cultures of Burzahom in Kashmir and with Yaung-Shao Neolithic in north China. Its local variation is reported from the Neolithic levels of Jalilpur.

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**Period II**

Period II is marked by a pottery which recalls the so-called Kot Dijian pottery. At present it is difficult to say where these people came from. But it is clear that this site was occupied by a new village community after the late neolithie period. In this period the brown burnished pottery decreased and the Kot Dijian type pottery appeared in various forms.

Structural evidence is very scanty. It is presumed that most people still lived in huts. This is evident from the number of post-holes found filled with *kankar* and gritty material. The fire-place and concentration of pottery were found within the area enclosed by post-holes which thus mark the size and shape of the huts. Huts were rectangular in shape. Floors were made up of rammed earth and *kankar*.

The pottery assemblage of Period II consisted of a number of a new motifs and new wares. In the early stages of Period II, brown burnished ware was common but slowly and

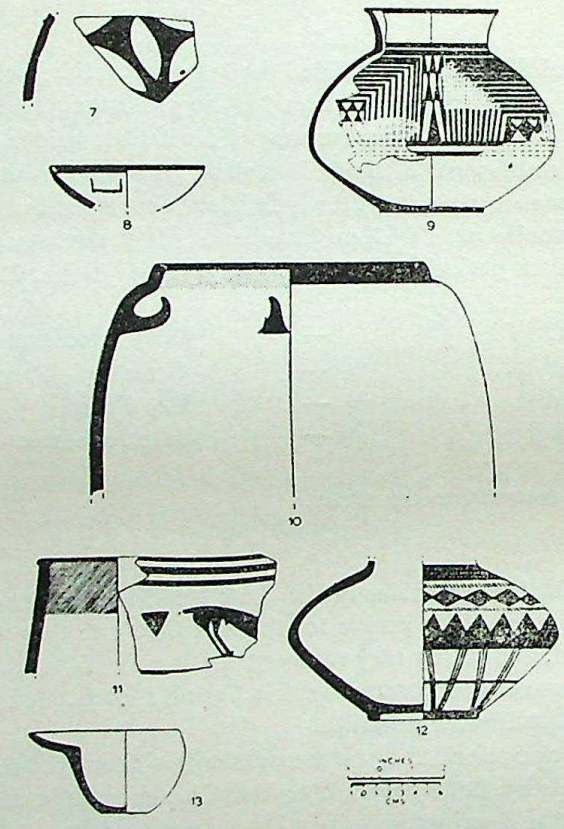


Fig. 3.10. Painted pottery from Jalilpur, Sarai Khola, Rana Ghundai and Dabar Kot.

gradually it was replaced by the Kot Dijian type of pottery. In the beginning of Period II, the Kot Dijian style of pottery is recognized by its medium texture, externally grooved globular vessels and the red, sepia and black neck bands. In later stages, complex designs like loops, horizontal and wavy lines became dominant. The *pipal* leaf and arrow motifs have also been found. The main pottery types were open-mouthed and extremely grooved vessels with everted and beaded rims, flat bases, elliptical jars with a prominant flange or an external ledge

*Fig. 3.10*

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for lids, bowls, flat dishes, medium sized thick textured jars and dishes on stands.

The other antiquities of this period included stone celts, chisels, sling balls, grounders, cores, micro-blades long flint blades and scrapers. Blades of carnelian, lapis lazuli, agate, etc. were also reported. The bangles were made of faience. Terracotta objects comprised figurins (human and animal), a toy-cart, wheels, blades, bangles and playing discs. Bone points, chisels, and shell objects were noticed in the cultural assemblage. Copper is also attested to. Antimony rods and pins, bangles, needles, nail parers, spear-heads have been found.

Period I at Sarai Khola belongs to the late Neolithic group and is assignable to the fourth millennium B.C. Mughal notes the similarity between Anjira I-II and KGM II-IV.

There is also a short transitional phase which marks the arrival of a peaceful community with highly developed cultural traits. The new arrivals settled on the site of the neolithic people. This period II at Sarai Khola marks the beginning of Bronze Age—the cultural traits of which are dated to about the beginning of the third millennium B.C. On the basis of the ceramics, this period can be related to Jalilpur II, Gumla II-III, Kot Diji levels 4 to 16, Harappa layers (26) and 26 (A), Kalibangan I, Banawali I.

After this, the site was deserted and remained abandoned for a long time.

## NORTHERN BALUCHISTAN

### Moghul Ghundai

Moghul Ghundai is located on the left bank of the Zhob, a little over 15 km to the south-west of Fort Sandeman in northern Baluchistan. It covers an area of 82.30×22.86m. It rises to a height of 6.71m above the surrounding levels.

Stein (1929:33-49) laid two broad trenches running north-south and east-west, crossing at the centre of the top of the mound. Unfortunately, the excavators went only to a depth of 2.44 m. On the basis of the material recovered in the trenches, Stein has been of the opinion that this mound belongs to Periano Ghundai culture. Stein, as usual did not maintain the stratigraphy of the site. It is, therefore, difficult to form any archaeological sequence of this site except for the fact that the site was under occupation during Rana Ghundai Period of Zhob and Loralai sequence and Damb Sadaat III and Mehargarh VII of the Quetta region. We have the mixed material occuring at different levels from the base to the top of the mound. This material revealed parallels for the material discovered in the Middle Strata and the Upper Strata of Periano Ghundai. Thus it appears that this site was occupied for a very long period. Fairservis (1959:359-60) has also collected this material from the surface.

The so-called 'Periano Reserve Slip' found in the Middle Strata of Periano Ghundai is present at Moghul Ghundai. The Early Harappan cultural assemblages, known to us, mainly from the Middle Strata of Periano Ghundai, was found here in the form of Kot Dijian pottery forms globular vessels with short rim and painted around the shoulder, vessels with wide band around the short neck, jars with flanged rim. Decorative designs, especially geometrical, are very much similar to the designs of Periano Ghundai Upper and Middle Strata. The patterns are painted in black over a dark terracotta colour. Sometimes black decoration over a light pink clay or over a yellowish or light brown wash has been noticed. The execution of the designs is more carefully done in comparison to Periano Ghundai pottery. Incised decoration was very limited. Quetta Wet Ware also connects this site with the other Baluchi sites.

The occurrence of some ceramics and Zhob style female figurines at Moghul Ghundai

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place the site along the Upper Strata of Periano Ghundai.

Mud-brick walls of small dwellings with undressed stone foundations were reported at every level. Some copper fragments and short legged humped bull figurines of terracotta have also been found.

The Periano Ghundai type urn burials have been found at this site also.

The mound revealed the occupation of late prehistoric period of Baluchistan. However, at Periano Ghundai, in Middle Strata, the parallels are more with the Early Harappan or Kot Dijian assemblages but the Upper Strata shows strong similarity with Baluchi material. Since here the material is mixed and the depth of their discovery is not reported we cannot decide any thing definite except that in Rana Ghundai III times the site was inhabited. In any case, the site needs re-excavation, going down to the virgin soil.

**Periano Ghundai**

Periano Ghundai is situated about 6 km west of the Fort Sandeman cantonment. It covers an area of some 457.2 × 320.04 m and rises to a height of 21.34 m above the plain level. The credit of its discovery goes to F. Noetling of the Geological Survey of India, who visited this site in 1898. Translated name of the site means 'the witches mound.' Stein (1929:33-41) visited the site in 1927 and laid a few trial trenches. On the basis of the excavated material, he was able to distinguish two distinct stratigraphical phases of prehistoric occupation. For the sake of convenience, Mughal (1970:211-221) appropriately named the lower levels 'Middle Strata' and the upper levels 'Upper Strata'. Fairservis (1959:329-333) who, in 1950, scraped Stein's old section and collected material from the surface, tried to redefine these phases. According to him, the lower phase is the Zhob Cult Phase and the upper one, the Incinerary Pot Burial Phase. Mughal critiqued the material and thus refuted the terminology given by Fairservis. The lower depth, about 4.58 × 7.62 m or more of the mound, is unexpected.

The excavated material is enough to convince us that this belongs to one homogeneous, culture, prehistoric and of long duration. There is no break between the two strata. A number of ceramics and other antiquities in both witnessed the continuity of culture. In fact, like Kot Diji, certain traits are shared by the people of the two phases.

Two structural levels belong to the Middle Strata and two or three structural levels could be assigned to the Upper Strata. However, mudbrick walls with stone foundation were noticed at all levels. The rooms were large : 4.88 × 2.74 m. Burials were done under the floors of the houses. The artefactual remains show that the same techniques and same materials were used in both strata. Similarly, a number of shapes and designs of pottery are continued in the later period.

Ceramic bowls with a narrow base and pottery with distinctive painted designs from the Middle Strata are comparable with specimens from the Upper Strata, Humped bull figurines, terracotta bangles, parallel sided blades, copper, alabaster and bone objects are common to both strata.

A major difference between the two strata is the appearance of terracotta female figurines, the so-called Zhob Mother Goddess, in the Upper Strata. Fairservis has included them in his Zhob Cult phase which roughly corresponds with Mughal's Middle Strata. In fact, it should appear in his Incinerary Pot Burial Phase.

The pottery of the Upper Strata included small pear-shaped jars with a footed or ring base, small flat patera-shaped cups, an oil lamp, a painted saucer, a lid, etc. The painted

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designs consist of simple horizontal eagle-shaped birds, vertical fish and triangle designs. It is normally painted in black-on-red slip. The Kot Diji type of short-necked globular vessels were also found.

The pottery of the Middle Strata included small footed, pear-shaped jars, vessels with handles, large dishes, big pots for burial with geometric decorations. Animal motifs were limited; the bull, fish, bird, hooded snake, etc., were more common.

The Middle Strata offered material comparable to the material culture of the pre-or Early Harappan assemblages of the Greater Indus Valley. The Upper Strata, though it has only a few parallels in the Early Harappan, had more material which could be compared with those of the Quetta Valley and Loralai-RG III, DS III. Mughal has cited a number of examples from the Middle Strata like the fragment of a vase with concentric circles, an open-mouthed bowl with a series of incised lines on the inner surface, globular pots, pot-sherds with narrow ribbings on the external surface, short-necked pottery, Periano Reserve Slip. leaf-shaped arrow-heads which has their parallels in the Greater Indus Valley in the Early Phase.

Fairservis (1959:333) speaks of a strong Harappan influence on this site and in support provides the evidence of perforated sherds, lids, clay bangles, etc. Mughal (1970:217) feels that there was no Mature Harappan influence on this site. The evidence provided by Fairservis is only marginal and, except for the perforated pot-sherds there is nothing much typically Harappan in it.

It appears that this site belongs to the Pre-Harappan Complex. During the Middle Strata, ties with the Pre-Harappan sites were stronger than in the Upper Strata. With the Upper Strata the ties became weaker, and more localized traits entered in the site. The local complex was quite strong and it checked the Harappan influence penetrating its fabric.

**Rana Ghundai**

The site of Rana Ghundai is situated on the fertile plain of Loralai, about 28.96 km north-northeast of Sur Jangal. The site was systematically excavated and many years of local plundering have completely disturbed the ancient mound. On his visit to Rana Ghundai, Stein (1929:52-53) had seen its 12.20 m height above the plains and 143-26 m circumference.

E.J.Ross (1946:291-315) excavated this site when he was posted there on military duty. He provided the sequence in 1946 which was modified by Piggott in 1950. Piggott gave numbers to the periods named by Ross. Fairservis also explored the site in 1950 and collected 101 potsherds and attempted to modify the Ross and Piggott sequences. However, the original information supplied by Ross and Piggott is still most reliable.

Virgin soil was never reached in the excavation. Although a number of sites, with comparable material, have been explored in Baluchistan, a few important points are noticeable here. Metal remains have not been found by any explorer. In fact, very few artefacts other than pottey have been found at this site. The dearth of either animal or human figurines is also unusual because these are relatively abundant in comparable sites elsewhere.

Piggott (1950:120) divided the cultural deposit in following five periods of which three are relevant here:

Rana Ghundai III/a, b, c.
Rana Ghundai II (Bull period of Ross)
Rana Ghundai I (Pre-Bull Period of Ross)

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**Rana Ghundai I**

Period I has not revealed any structure. Handmade unpainted pottery, flint blades without any sheen, bone points, needles with eyes are reported from this period. The animal bones recovered were of Bos indicus, Ovis Vignei, Equus arinus and four teeth of Equus caballus. This was thus a nomadic camp site. Dales has put RG I under his Phase C while I agree with Agrawal when he includes it in the neolithic group.

**Rana Ghundai II**

Period II is marked by the sudden instrusion of wheel-turned painted pottery. The motif of the humped bull and black buck was very popular and was painted on red slipped pottery. Numerous stone blades and animal bones have been discovered. Clay floors are reported. However, no structural remains have been noticed although Piggott suspects the presence of mud walls on stone foundations. This period was a very short lived stage.

**Rana Ghnndai III**

R.G. III continued R.G. II tradition and also adopted a number of new cultural elements. This stage was a long lived one. Structural remains of three phases (a, b, & c) have been found.

*RG IIIa*: Fine brushwork which was the characteristic of RG II pottery was followed in R.G. IIIa pottery also. Bichrome decoration with panelled squares or rectangles, recalled Amri Ware. The use of red paint as a secondary colour appears in RG IIIa.

*RG IIIb*: In this phase, the tendency towards coarse brushwork over red slip developed. Carafe-like vessels appeared for the first time.

*RG IIIc*: This phase witnessed almost all the pottery forms of the previous phase. However, a few new wares made their entry and dominated the scene, for example the Faiz Mohammad Painted, Quetta Wet, Kechi Beg Polychrome, etc. A variety of painted designs in black over red slip have been noticed. The painting coarsened noticeably and the red background deepened visibly.

This phase was destroyed by fire. Periods IV and V show complete break from the Period III.

On the basis of a few Kot Dijian pottery types (short necked pottery jars and flanged rim jars) collected from the surface of this site, Mughal believes that RG IIIa-c levels are comparable in date to the Early Harappan of the Indus Valley. To support this he further provided the evidence of the use of white colour in painted designs in RG IIIa which was a characteristic feature of Sothi Ware. It may be added that the use of white with black painting red pottery has been observed at Rehman Dheri and other sites in Gomal and Bannu plains. Mughal further traces the similarities in the bichrome ware of Amri, showing the fish-scale motif and chequered designs and the ware of Rana Ghundai, Periano Ghundai and Sur Jangal.

The site has not revealed any trace of mature Harappan influence though the Harappan site of Dabar Kot is nearby.

**Sur Jangal**

The site of Sur Jangal is situated in the midst of the narrow Baghnao Valley of the Thal river, some 1.61 km northwest of Duki mound, and about 304.8 m high in elevation. The mound measures 4.88 m high and 66.89 sq m in area.

Stein (1929:73-77) visited this site in 1927 and laid as many as six trenches. Fairservis (1959:293-294) examined this site in 1950 and laid three other cuts. These excavations yielded a

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continuous habitational sequence for a thousand years. It was a prehistoric village of small size which had never expanded much beyond its original coverage, even in the last phase of its habitation. Fairservis divided the cultural deposits in three periods—Sur Jangal I, equivalent to KGM III, Sur Jangal II, equivalent to DS I; and Sur Jangal III equivalent to DS II. Mud-brick walls were recovered in all periods. Stone pebbles and boulders were also found. They may have been used for the foundation of houses. However, complete structures could not be located. These walls might represent small huts and rooms for domestic purposes as the hearth with charcoal layers indicate. The flint industry was prevalent during all the periods. Clay bangles, often painted with stripes, pottery spoons, a bone spatula and alabaster head had been found in Period I. Clay bangles continued. Sur Jangal pottery characterized Jangal Coarse Painted, Kile Gul Mohammad Black-on-red slip, Loralai striped, Jangal Dark Slip, Kechi Beg Wet Ware, Loralai Coarse Khojak Parallel painted. These wares showed considerable decrease in Sur Jangal II levels.

The most important discovery of this site comprises clay figurines in large numbers. However, most of them are surface findings, for example the Zhob type mother goddess. Sur Jangal II and III produced a large number of female figurines. The base of of a terracotta house model was found in Sur Jangal II which was a common tradition of Baluchistan.

Sur Jangal II pottery included Jangal painted the Black-on-red slip variant (similar to the Rana Ghundai Bull Pottery of Ross and Piggott), Loralai striped and Jangal Fine Red Slip, Kechi Beg Wet Ware, Khojak Parallel striated, etc.

Sur Jangal III pottery included all the types of Sur Jangal II and also a few new types—Periano Painted, Faiz Mohammad Painted, Quetta Wet, Jangal Polychrome, Kechi Beg Polychrome, Rana Ghundai black-on-red slip. The Zhob mother goddess might belong to this period. New influence penetrated in this site at this time.

In Baluchistan, almost on all the sites, remains of goats and sheep were found in abundance. However, it is the other way round on this site. Cattle bones are found here in bulk. The people were, therefore, primarily the cattle raisers. But cattle figurines are not found in abundance.

The Harappan influence did not reach Sur Jangal though the Harappan site of Dabar Kot was nearby.

**Dabar Kot**

The mound of Dabar Kot is situated in the Thal river plain. It is certainly the largest site of its kind in Baluchistan. It measures 152.4 × 137.16 m and is 34.44 m high above the plain. The site was first visited by Fritz Neolting in 1893. In 1927 Stein (1929:54-64) revisited the site and laid a number of trenches. In 1950 Fairservis (1959:308) and F.A. Khan explored the site and collected a large number of potsherds and other cultural items from the surface.

The excavations conducted by Stein were not at all systematic. The mound is of course disturbed by the careless digging by villagers for earth. The material for study is, therefore, very limited, and frustrating.

The trial trenches laid by Stein revealed material which could be compared with the material of Pre-Harappan and Mature Harappan. However, in the excavation it was difficult to define the Pre-Harappan and Mature Harappan phases. On the basis of the available material we can find pre-Harappan, Harappan, including Early Harappan, and later (Buddhist, Sassanian) occupational levels.

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For the pre-Harappan period we have mainly to depend on surface collection, pottery close to Rana Ghundai III and Sur Jangal III. The finding of checker design and Black Buck motif, commonly found at Rana Ghundai II-III, grouped this site with the chalcolithic sites of this region. The so-called Faiz Mohammad Grey Painted Ware and Wet Ware, widely distributed in Baluchistan, are also noticed here. The most remarkable discovery of this period was a Zhob type mother goddess in the bottom of a drain. Fairservis, on the basis of the surface data, attributed a number of wares to this site for this period—Jangal Coarse Painted, Kile Gul Mohammad black-on-red slip, etc. These wares show that the site was occupied at a much earlier date than is normally imagained. The height of the existing mound plus the unknown depth below the present plain surface suggest its much earlier occupation which is still not exposed.

The Harappan pottery included black-on-red pottery with floral and curvilinear designs, fruit stands, incised wares, lids and perforated sherds. Clay figurines and clay bangles are also reported. A copper cup, some copper bangles, flint scrapers, flint arrow-heads and stone beads are also worth notice.

In trench D.N.D. a large drain, built of mud and burnt bricks, in the midst of a structure had been located. Regular drains are one of the features of the Indus towns. In the bottom of this drain the Zhob mother goddess had been reported. Compartmented seals, clay bangles, a potsherd of Harappan type have been found in this building. Fairservis feels that this structure was a part of the citadel. He feels that the Harappan influences blended with an indigenous Baluchi cult. The association suggests a blend that occurred during the last major prehistoric period in Baluchistan, that is in DS III times. A well, lined with stones and burnt bricks, was also exposed. The unique discovery from this site is a stone sculpture—a male head. During Caspers compared it with some Mesopotamian heads. However, the exact parallel could not be traced in Mesopotamian sites also. A human head of terracotta is interesting.

The limited data do not permit us to pin point the Kot Diji or Pre-Harappan cultural horizon at any specific level of the mound. Definite signs of the Harappan occupation seem to occur at 9.1 to 10.7 metres below the top of the mound, at least on the north-eastern slopes. Below this level the Harappan pottery is absent or very rare. According to Fairservis, the concentration of Harappan potsherds was found on the western slopes.

Nothing more could be said firmly except that the site was occupied during DS III and the Harappan periods.

**Mehargarh**

The site of Mehargarh is located in northern region of the Kachhi plains, at the foot of the Bolan Pass. Here the Bolan river enters the plains and now cuts the ancient settlements. A French Archaeological Mission started excavations in 1974 and the work is still continuing (Jarrige 1979, 1981, 1982, 1984 a & 1984 b Jarriage & Lechevallier 1979; Jarriage and Meadow 1980). The excavations were carried at four places, labelled as MR1 (main mound), MR2, MR3 and MR4. These diggings have brought to light a continuous sequence of occupation, ranging from the seventh millennium B.C. to the middle of the third millennium B.C. So far this is the only site which has revealed such continuous sequence of cultures in Baluchistan. Before this only Kile Gul Mohammad and Damb Sadaat were the known sites which together had suggested this cultural sequence though such an antiquity of the neolithic

*Fig. 3.11*

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(Lechevallier & Quivron 1981) and chalcolithic cultures in this region has been established for the first time.

The excavated area of this site covered over 1650 sq m. Seven phases of continuous occupation with evident overlaps have been discovered.

**Period I**

The oldest settlement, which represented the pre-ceramic Neolithic Culture, has been discovered in the MR3 area. Eight seasons of work has shown that the area was occupied by permanent farming communities who did make use of pottery. It is, therefore, labelled pre-pottery Neolithic stage. The radiocarbon dates allot a date slightly prior to the seventh millennium B.C. for the beginning of this period. More than 700 sq m area has been opened and that has shown that the settlement consisted of multi-room units separated from one another by open spaces that held numerous human burials. Some of the structures were divided into small square compartments apparently used for storage. The main building material was rectangular mud-brick. A number of ovens and circular hearths have been found in the excavated areas. Stone tools included grinding stones and small flint blades and flakes. *Fig. 2.6A*

Agriculture was practised as is evidenced from several sources: first by the flint blades showing sheen produced from cutting plants; secondly; the finding of the impressions of various cereal grains in the mud debris, like two-row barley, six-row barley, einkorn wheat, emmer, bread wheat. This proves Baluchistan a great centre of cereal cultivation. Some seven metre below in the neolithic (MR3) deposit additional imprints of six-row barley, einkorn, emmer and bread wheat were found. In other levels of this deposit the remains of plants other than cereals have also been traced. Charred seeds of the plum like jujube fruit and the stones of dates have equally been uncovered in these levels, indicating that both trees were food resources in the Neolithic times.

The animal remains are another important sources of information about the development of Neolithism at Mehargarh. In the earlier assemblages the remains of wild animals like gazelles, wild sheep, wild goats, swamp deer, large antelopes and wild cattle could be seen in large numbers but in later periods they are gradually replaced by the domesticated varieties — domesticated cattle, goats, etc.

A few remains in the upper levels of Period I show wild characteristics—gazelles, wild pigs, onagers. It is thus clear that the Neolithic period at Mehargarh witnessed the process of domestication of plants and animals as early as it did in Western Asia.

Interestingly, a number of bones of water buffalo have been found in the neolithic assemblages. It is for the first time, that animal has been seen in any Asian site outside of eastern China.

A word about the graves. In the earliest levels the bodies were buried both in the flexed position and in the extended position and covered with red ochre. The grave-goods include beads and neckleces, anklets, and belts of beads. The beads were made out of shell, bone, various local stones and imported turquoise. Sometimes a basket coated with bitumen was included and placed near the body filled with perishable goods. Incidentally, it also shows that the earliest pottery at Mehargarh was made from the baskets coated with bitumen and clay. The device was simple and effective: it made the walls of the basket impervious and, therefore, pot-like. Later on, the imagination took the logical step: pots were made directly from clay.

In the top level, thirty graves were opened. Each grave was bordered on one side by a

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wall or platform of mud-bricks. The grave-goods included polished stone axes, blades and geometric microliths of flint, stone vessels, cakes of red ochre and personal ornaments, such as strings of beads, several of them made of imported turquoise and lapis lazuli. Significantly, a copper bead in cylindrical shape has also been found. The artefacts recovered from Period I are most abundant—flint tools alone are 20,000. Geometrically shaped flint bladelets, such as trepezes and triangles represent 4% of the total. Among the bone tools, awls predominate.

*Fig. 2.7*

The other most significant finds of this period include five clay figurines, three represent human beings and two animals.

The period is dated to the seventh millennium B.C. However, ten metre thick deposit required a long span of time and it appears that Period I is to be bracketed between late eight millennium B.C. and sixth millennium B.C.

**Period II**

Period II settlement is still neolithic, going back to the sixth-fifth millennium B.C. It is further divided into IIA, IIB and IIC, as follows : (Jarrige 1984B : 21-28).

**Important Characteristics of Period II and A, B and C**

**Period IIA**

In IIA the pottery appears for the first time but it is hand-made, crude, chaff tempered, occasionally slipped in plum red. Quantitatively, it is extremely limited. In a 300 sq m area only two to three potsherds were encountered. The excavator had compared this pottery with that found in Western Iran, at sites like Sang-e Chakmak, in the levels just above the levels of aceramic neolithic.

Unfortunately, the deposits of this period are found largely washed out. However, remains of three compartmented buildings have been detected in these levels.

Amongst the very few antiquities discovered in these levels one deserves very special mention—an elephant tusk, grooved by artisans. Undoubtedly this is the earliest evidence of ivory work in this part of the world.

The cereal remains include seeds of barley (*Hordeum sphaerococcuum*) found in the cell units as well as in an ashy dump north of the building in large numbers. This is to be noted that this species was completely absent in the levels of Period I, i.e. aceramic neolithic. Since this variety of barley could be grown only in the irrigated fields, it implies an improved method of farming in the Kachhi plains.

**Period IIB**

The number of potsherds increases but only slightly. The increase has been attributed by the excavators to the fact that now the pottery becomes much finer with vessels shaped on a turn table and afterwards expanded and rounded with a dabber. However, since the increase in pottery is extremely limited, it is doubtful if pottery as a cultural element played any significant role in the everyday life of the people.

**Period IIC**

Along with the handmade and basket marked pottery we have now for the first time the wheel-thrown pottery similar to Kile Gul Muhammad II style. It is to be noted that now

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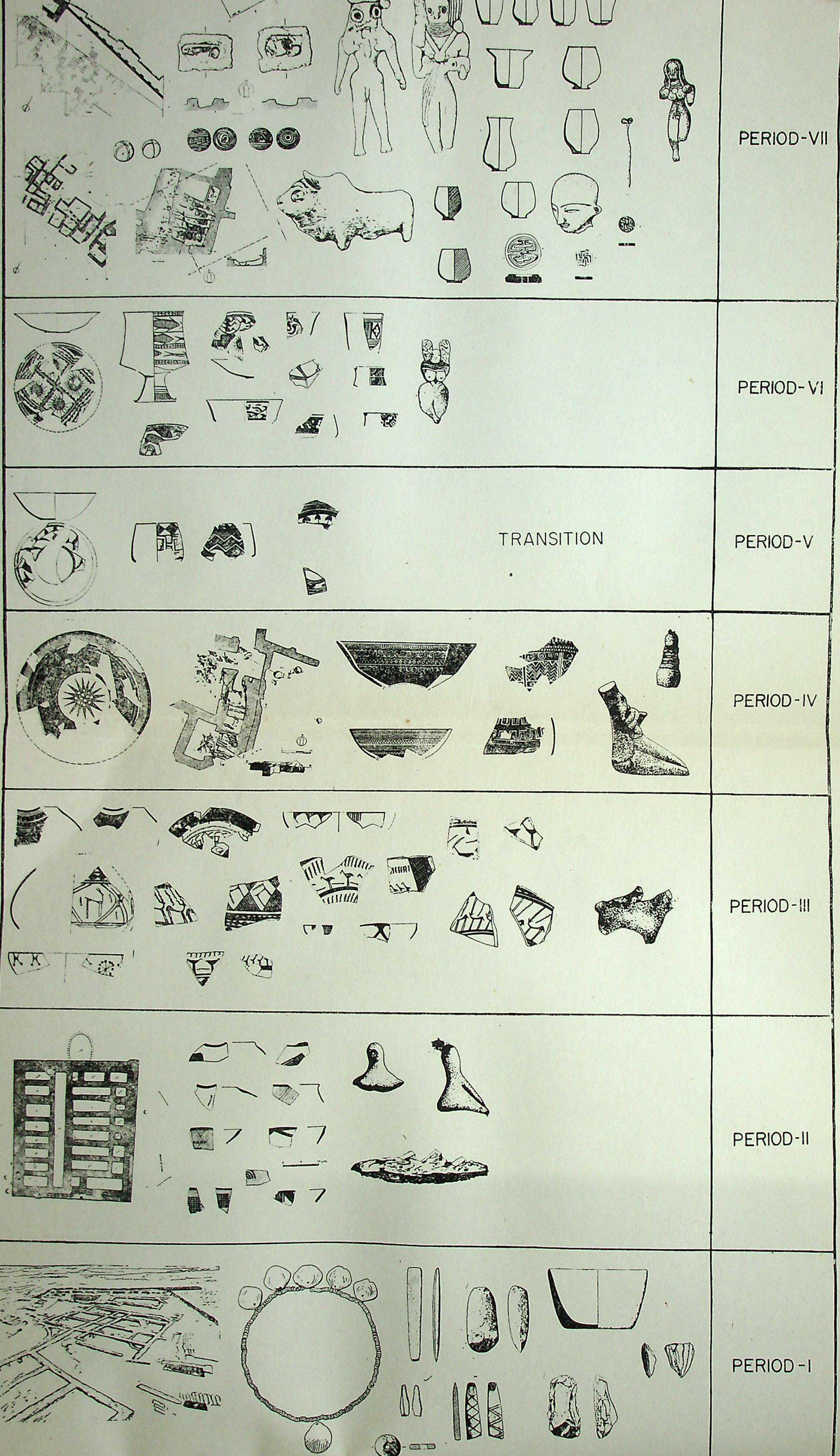


Fig. 3.11. Mehargarh I-VII : Cultural Sequence

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onwards we have the evidence of pottery being produced on a mass scale.

Period II deposits have been encountered in Area MR4. It is, as noted earlier, marked by the introduction of pottery. Excavation in these levels have brought to light several rectangular structures that are subdivided into narrow, doorless compartments. In the fill of the compartments of one of the structures were found the imprints of wheat and barley grains and two sickles having three flint bladelets set at an angle in bitumen. The bitumen in turn had been laid in a groove cut into a wood handle. It, therefore, appears that some of the compartments were used as the storage of grains. **Pl. 7** **Pl. 8**

Outside the walls of one of the structures several hundred charred seeds were found in a large burned area. They included different varieties of wheat and barley and some seeds of domesticated cotton. The discovery of cotton seeds is remarkable since this is the earliest evidence of this item in this part of the world. *Fig. 11 & 11a*

Animal bone fragments, found in abundance, revealed the presence of important domesticated animals—cattle, sheep and goat. Cattle dominates. And this is very significant since from Iran to Baluchistan, the hill settlements during the Neolithic times favoured sheep and goat. These animals provided most of the meat to the people of Mehargarh during the Ceramic Neolithic times. Against the south wall of one of the subdivided structures excavations uncovered a workshop where beads were manufactured out of soapstone. The flint drills and waste flakes, conclusively prove the presence of local industrial workshops. Beads were indeed found in different manufacturing stages. Beads made out of shell were also recorded.

Significantly, an open-space, east of the same structure, was found covered with layers of animal bones mixed with ashes. The space yielded more than 100 bone awls and several grooved stones used in shaping their points. It shows some sort of another industrial area.

The use of red ochre continued during this period. The stone implements included grinding stones and flint tools in abundance. Two clay human figurines are important additions to our knowledge of plastic art in the India of the fifth millennium B.C. However, the metal remains were scarce—one copper ring and one copper bead alone have been recorded. **Pl. 9**

The ceramics, by and large, belong to fine ware in limited quantities. The commonest forms are pear shaped (red) jars with outward curbing rims The clay of many jars is burnished and surface marking shows that they were wheel-turned. Pottery, significantly, shows resemblance with the pottery of Kile Gul Mohammad II, a fact which shows that during this period larger areas were inhabited and also that the movement of the people was from the Kachhi plains towards the hills in the west and not towards the Indus plain in the east—we have so far no site in the Indus which is comparable to it. *Fig. 2.12*

**Period III**

Period III is assigned to 4000 B.C. Its settlement has been revealed in Area MR2. Continuity from the earlier culture is demonstrated by the occurrence of pottery similar to that found on the surface and in a number of compartmented structures recorded in MR4. The structures in this period are somewhat larger and more elaborate than those of Period II. Crafts show marked development : lapis lazuli, turquoise, and carnelian were worked into beads with green cylindrical jasper drills. The jasper bits of this period are the earliest specimen known of a type that was used during the third millennium B.C. at Shahr-i-Sokhta, Shahdad and at Chanhu-daro. These are some very fine micro-drills indicating the use of low-drills working and engraving ornaments in shell.

The pottery of this period is predominantly wheel-thrown ; 30% of the sherds are in a

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coarse buff ware, the remaining sherds are fine, in light buff ware, with 40% of the examples a red slip. 10% of the potsherds are painted in black on red background or on the buff surface. *Fig. 2.15* Rows of processing caprids or birds exist among registers of geometrical motifs. Flying birds are quite often associated with painted motifs. Geometrical designs include dot-tipped motifs, rosettes, hatched or plain triangles or butterfly patterns and chequer board patterns. Besides these new motifs, bowls with rims decorated with suspended vertical lines or with suspended festoons are identical in their forms, fabrics and paintings to the pottery of Period II.

The pottery of this period is similar to the pottery of Kile Gul Mohammad III. The animal designs could be related to Togau A, Hissar I-B—I-C, Sialk III and Namazga II. They must have been existing in one horizon. The period records the first appearance of Wet Ware.

During Mehargarh III the pottery was mass produced. Metal production is evident here by findings of the fragments of several crucibles that had been used to melt copper. Traces of the metal still adhered to them.

Two terracotta animal—one humped bull and one dog (?) have been important discoveries in the field of plastic art. Many painted bangles, like those of Period II, have been found. A disc shaped pendant and clay rattles decorated with incised intersecting lines have also been found in these levels. Stone implements included blades, bladelets, burins, notched blades, truncated blades, borers, sickles, ring-stones and grinding stones. Bone needles and awls have also been found along with highly polished spatulas. Kitchen refuse yielded a lot of burnt bones of domesticated animals, mainly cattle.

Amongst the agricultural developments the gamut of the cereals of earlier periods were enlarged by two new bread wheats and a new barley. An entirely new cereal genus, oats, has also been identified.

The period witnessed an extension on several hectares, the practice of mixed cereal farming continued herding of cattle, sheep and goats, abundant food and the use of fine bichrome and wet wares. Before the end of this period MR2 area had grown until it covered almost 50 hectares.

**Period IV**

This period is represented on the main mound in MR1 area. It is dated to 3500 B.C. Here excavations have exposed buildings with wooden super structures and with large storage jars.

All the pottery of this period is wheel-thrown, sturdy and fine. The forms included fine and fragile goblets in a greenish ware, medium sized carinated jars in Wet Ware, huge jars with surface striated by curving lines made by finger pressure or heavy basins of greenish buff wares, internally decorated with parallel ridges ; and one undulating ridge representing a snake. Snake depiction is a common phenomenon in Iran and Baluchistan.

The painted pottery consisted of three styles : one with geometric motifs painted in black, **Pl. 10** one with geometric motifs painted in two colours and the third polychrome, using red, black and white. Painted motifs have parallels in Kechi Beg style and Togau B style. But the range of decorative motifs at this site is much larger. Here we see the geometrization of animal *Fig. 2.18* patterns of Period III pottery The caprids are slowly and gradually changed into zigzags and large open bowls are decorated by registers of loop-and-tassel motifs and horned friezes. These designs connect this site with a number of contemporary sites in Baluchistan,

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for example, Mundigak I and Amri IA.

The increasing variety of pottery shapes and sizes suggests that the potters were responding to a much more diversified demand.

The production of terracotta female figurines continued in more naturalistic forms. Seals of terracotta and bone are the first stamp seals to appear at Mehargarh. **Pl. 11**

**Period V**

It is the transitional phase at Mehargarh and it did not last for a long period. It could be dated to the middle of the fourth millennium B.C. The remains have been discovered in Area MR1. The parallels of its pottery can be seen in Togau D and Mundigak II. Polychrome decorations were, however, limited to bowls and small pots. Bichrome decorations were disappearing and monochrome decorations were commonly applied, showing the designs of 'Togau D' motif, hatched diamonds, broad squares, chevron motifs, etc. *Fig. 2.20*

This period witnessed the origin of a grey ware which became very popular in later times and brought Mehargarh on a very large canvas. The grey ware here is in the primitive stage. Red greyish pottery shows several geometric motifs, vegetal motifs and items of nature—fish, flower, proto-types of *pipal* leaf.

**Period VI**

With period VI we reach an important phase of the third millennium. Two things are important from now onwards—the mass production of pottery and emphasis on figurines made of terracotta. The period corresponds with Damb Sadaat II, Mundigak III, Shahr-i Sokhta I, Gumla II and Rehman Dheri I.

The architectural remains belonging to this period have been found in the central part of the main mound ; due to heavy erosion only the foundations of the walls have survived. The rooms and yards are full of storage jars, complete pots, grinding stones, mortars, pestles, particularly around fire-places floored with pebbles. An area where bases of circular kilns, built one above the other, were found, the excavators discovered thick layers of ash filled with deposits of millions of potsherds. Such bases of kilns paved with burnt pebbles, have been found in other areas also. These areas of open firing of pots and pans give definite evidence of semi-industrial productions of standardized utilitarian potteries, intended probably for a large market.

The period is marked by not only large scale ceramic production but also the emergence of new types. It also witnesses the first occurrence of the Quetta Ware profusely decorated with geometric motifs in black-on-buff which appears to have been partly inspired by the south Turkmenian Ware of Geoksyur style. Some other finds also reveal the north-western influence : leaf-shaped arrowheads of flint, compartmented seals in terracotta, stone and chlorite and one double spiral headed copper/bronze pin. Beads of lapis lazuli and turquoise are, however, indigenous. It may, however, be made clear that despite the occurrence of a few Quetta motifs on buff ware, most of the ceramic productions were developed from the earlier types. *Pipal* leaves painted on red ware, paims palnted on buff ware, animal designs, again show local developments.

Pottery with geometric motifs painted in black and white on red are still found in good numbers in the beginning of Period VI but almost disappears by the time the period closes. In fact, grey ware becomes the important ceramic at the site. Black painted motifs, sometimes in red also, can be seen beautifully executed on it. Vegetal designs, such as *pipal* leaves and

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*Fig. 2.21* palms are common. Animal representations are, however, remarkable Some scenes showing humped bulls among birds pre-figure the Kulli style decoration. It is significant to note that the Quetta Ware found in large numbers in the Quetta plateau was not abundant at Mehargarh, but the Quetta motifs are found developed on open bowls and fine small pots with a much greater diversity than in the case of the rather standardized potteries of Damb Sadaat II.

A set of fine canister pots made in grey ware as well as in buff ware with polychrome paintings show intersecting circles of geometric motifs sometimes filled with post-firing paintings. Such potsherds can be compared with Nal Polychrome pottery found in the cemetary of Nal. As they are limited in number, they may be considered as imported articles.

The production of female figurines also increased. In this period they were still modelled
**Pl. 11** in seated position but the legs are now encircled by a coil of clay, the face bears goggled applique eyes and large coils of clay on each side of the face give the impression of fantastic hairdress, the torso is rendered more realistic by being modelled with pendulous breasts that are partially concealed by multistrand necklaces.

A few terracotta bulls have also been found. In the upper levels of this period wild boar has been discovered.

The metal finds are very limited. Besides one chisel and one flat axe, we have only shapeless fragments.

Stone implements included blades, bladelets, microliths—lunate, triangles, trapezes, sickle blade, truncated blades, burins, scrapers. Bone awls have also been reported but in a limited quantity.

**Period VII**

This period represented the last occupation at the site and is dated from 2700 B.C. to 2500 B.C. which precedes the Harappan colonization of the region, although a number of typical painted Harappan potsherds have been collected from the top-most assemblage. The remains belonging to this period have been found in the southern part of the main mound and correspond to two successive phases. The early phase of this period witnessed
*Fig. 2.22* the monumental structure of a mud-brick platform ; in the later phase the area, which now overlooks the platform was occupied by intricate buildings among which many
**Pl. 12** storage rooms are found filled up with storage jars and sets of complete pots. An interesting house preceded by three square pillars, probably intended to support a porch-roof, has still its doors and niches supported by wooden lintels. In a corner of this house several pots, beads and stone objects were found in a circular basket.

A grave with a skeleton has been recorded between two walls, forming a sort of corridor. The grave-goods included two plates, one necklace of white baked kaolin beads alternating with carnelian and lapis lazuli beads and bracelets of white tiny beads. Two more skeletons in a highly flexed position, have been found under an earth tumulus in the northern part of the mound. Excavations have brought to light nineteen small clay boxes (60×45 cm) with skeletons of children from birth upto five years. This cemetery has been found in the central part of the main mound. An identical cemetery was found during the second campaign in the
*Fig. 3.12* northern part of the main mound

The ceramics of this period is characterized by plain standardized pots fine tulip shaped goblets, 'brandy' glasses piles of plates forming sets of different sizes, sturdy storage jars with collared rims and tapering lower parts on flat bases. About ten per cent of the

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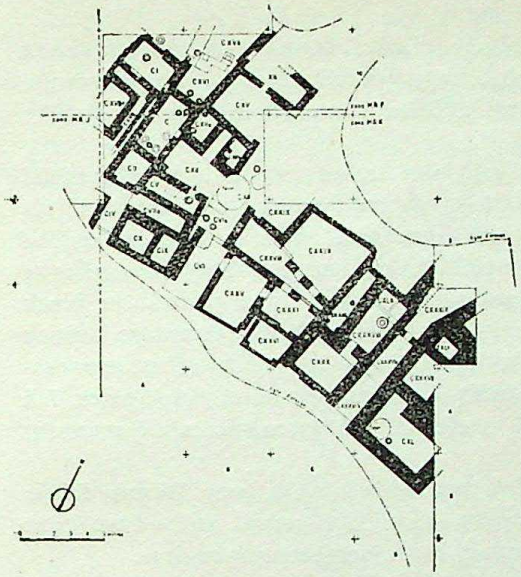
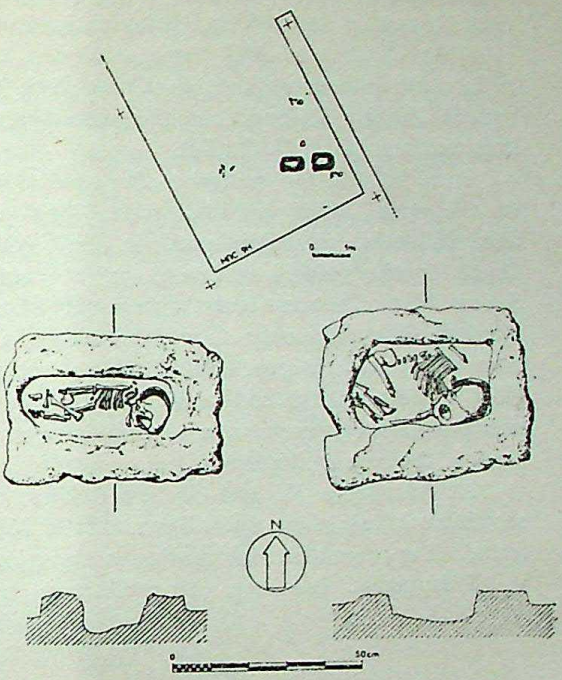
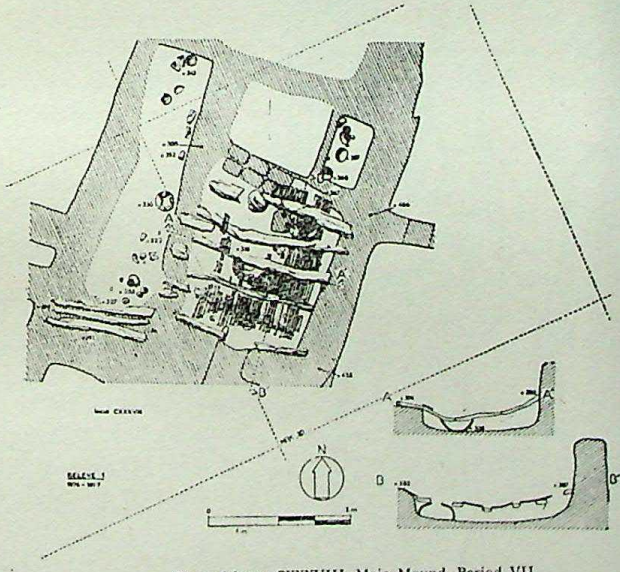


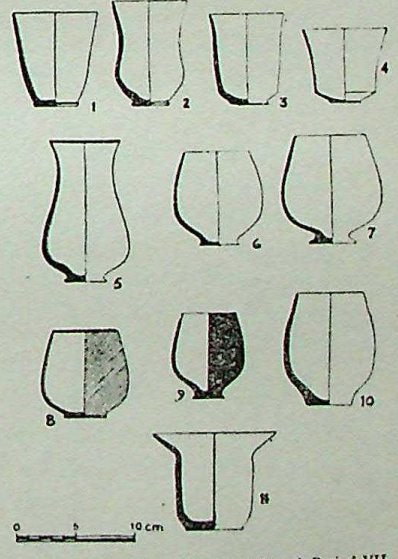
Main Mound. Plan of architectural remains in the upper layers of Period VII.



Plan of infant graves. Main Mound, Period VII.



Plan of locus CXXXVIII. Main Mound, Period VII.



Plain pottery from the Main Mound, Period VII.

Fig. 3.12. Mehargarh VII (Advanced Bronze Age): Structural remains, burials, plain pottery types, etc.

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pottery in Wet Ware forms are often very elegant. It is observed that the rows of stamped circles become a common decoration during this period.

Two chalices of grey ware, one with burnished black, the other with red burnished surface, are quite exceptional and do not look like locally produced objects. The grey ware type is entirely different from the painted grey ware of Baluchistan. These chalices look like imports from Hissar IIA and B.

For the painted potteries the *pipal* (*Ficus religiosa*) leaves remain a popular motif on the open bowls in red ware. Sets of tulip shaped goblets: carinated bowls and flattended globular pots in buff ware are decorared with a late variety of Quetta motifs painted in brown or in plum on pinkish buff surfaces. They are similar to Sadaat Ware. The most remarkable pottery of this period is the grey ware painted in black although it counts only four per cent in the habitational area while its percentage is much more in the potter's area. Animal, vegetal and geometrical designs are quite often remarkable for their quality and quantity. Running caprids on a background of *pipal* leaves, fish swimming among aquatic plants, combinations of finely painted geometric motif represent some of the best decorations.

At Mundigak IV and Shahr-i Sokhta a few potsherds of this grey Baluchi fabric showing acquatic plants and other motifs of Mehargarh—Faiz Mohammad style—have been found. It appears that Mehargarh was exporting pottery to the neighbouring regions.

This period has seen the production centre of the terracotta human figurines on a

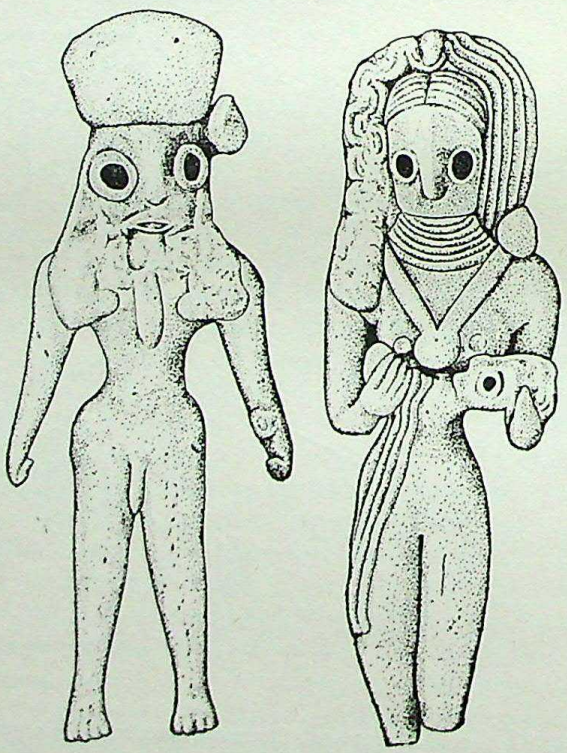

Fig. 3.13. Mehargarh VII Male and Female figurines.

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massive scale. Thousands of fragments, mostly arms and legs, and some specimens that are intact or nearly so, have been collected. The figures are no longer seated, they stand upright. The head remains stylized with goggled eyes and beaked noses but for the rest the modelling is more naturalistic than before. The female figurines exhibit a wide range of hairstyles, painted in black, and ornaments painted in yellow. These figurines are similar to Zhob mother goddesses. Male figurines also appeared. They have a large turban and a neck-tie shaped pendant **Pl. 13** **Pl. 14** *Fig. 3.13*

Terracotta animal figurines of good workmanship represented a humped bovine, the Zebu, wild pigs and various birds. A unique find is the figure of a ram carved from alabaster. *Fig. 3.13A*

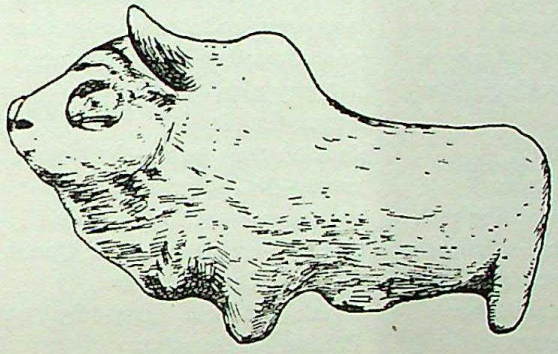

Fig. 3.13A. Mehargarh VII: Zebu terracotta figurine.

Many stamp seals have been unearthed. Most of them are made out of terracotta. One of them bears the figure of a running Zebu bull. The majority of the stamp seals are circular in outline *Fig. 3.14*

The lithic industry survived at the site till the middle of the third millennium B.C. Flint implements included blades, bladelets, microliths, sickle elements, lunates, triangles, trapezes, burins, scrapers and drills. Laurel-leaf shaped arrowheads are also associated with this period.

The most significant find is however the Kot Dijian pottery. The occurrence of several fragments of jars in a micaceous ware and decorated around the neck by painted bands in the upper-most layers of the main mound possibly shows that the ware was of pre-Harappan origin.

Several new elements, such as carinated bowls in sturdy buff ware with nail headed rims, long parallel sided blades, potsherds with cut-out designs, shallow dishes with lunar shaped design connect Mehargarh with the arrival of the Harappans at a nearby site known as Nowsharo.

**Period VIII**

It is a post-Pre-Harappan level, from the latter half of the third millennium and early of the second millennium. Its remains have largely been bound in the graveyards with red potteries, bronze objects and objects of semi-precious stones of the types found at sites like Dashly 3 and Sapalli tepe in the Oxus Valley (Santori 1984 : 52-60).

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Archaeological Sequence of Mehargarh

| Period | Site | Excavated areas | Main features | Dates (millennium B.C.) |
|---|---|---|---|---|
| Ia—c | MR 3 | houses—storerooms<br>cemeteries<br>open areas | pre-ceramic<br>unbaked figurines | 7th-6th |
| IIa—c | MR 4 | storerooms<br>cemetery<br>open areas | (a) straw-tempered<br>(b) polished plain red ware<br>first cylinder seal | 5th |
| III | MR 2 | storerooms<br>open areas | painted pottery (animal designs)<br>first evidence of metallurgy | first half 4th |
| IV | MR 1 | houses<br>open areas | painted pottery (geometrical decor) terracotta female figurines | middle 4th |
| V | MR 1 | pottery-firing area<br>children's cemetery | painted pottery (white pigment)<br>first grey ware<br>human figurines | end 4th |
| VI | MR 1 | houses<br>open areas<br>pottery-firing area | black-on-grey ware—Quetta red ware—Nal polychrome<br>compartmented stamp seals | beginning 3rd |
| VII | MR 1 | houses—storerooms<br>open areas<br>large platform | black-on-grey ware—late Quetta ware—Kot Diji ware<br>female and male human figurines | middle 3rd |
| VIII | South of MR 1 | cemetery | Central Asian pottery<br>shaft-hole bronze axe | end 3rd |
| | Sibri | domestic structures<br>open areas | cylinder seal | |

*Fig. 2.23*

**Damb Sadaat**

The mound of Damb Sadaat is situated about 13 km west of Quetta town. It covers an area of 140 × 105m with a maximum height of 14 m. Fairservis (1956: 207-234) during the course of his explorations, laid two trenches and proposed the following sequence of cultures on the basis of the excavated material seen in relation to the material unearthed in neighbouring regions ; Damb Sadaat I to Damb Sadaat III (from bottom to top). It runs through the middle of the fourth millennium B.C. to the middle of third millennium B.C.

**PeriodI**

The first period of Damb Sadaat (DS I) shows the continuity of Kile Gul Mohammad IV culture, found widespread in the Quetta Valley. It has yielded mud-brick walls on stone foundations, and also stone walls of boulders. The main pottery complex included the so-called Kechi Beg type wares : Kechi Beg Black-on-buff slip, brown-on-buff surface, Kechi Beg Polychrome, and Kechi Beg White-on-dark slip. The painted designs include geometric motifs. Bone implements have been found in abundance. Stone objects are numerous—beads, scrapers, cores, stone balls, etc.

*Fig. 3.15*

**Period II**

The second period of Damb Sadaat (DS II) gives a wider perspective—new wares and new motifs, animal figurines, metal objects, etc.

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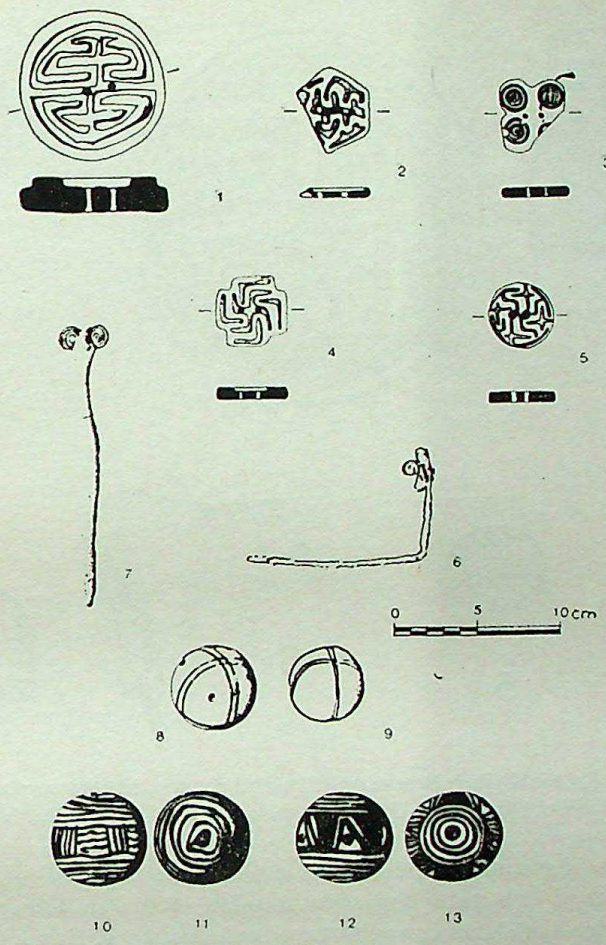
In this phase the use of mud-brick walls on stone foundations and stone walls continued. The lower phase of DS II contained pot decorations which appear to have been derived from DS I designs, while the upper phases of DS II witnessed a new ware, popularly known as




Miscellaneous finds from MR. 2 and the Main Mound

Fig. 3.14. Mehargarh VII: Stamp seals, copper-bronze pins and clay balls.

'Quetta Ware' black-on-buff slip and Quetta Black-on-buff surface ware. The decorative motifs included geometrical designs, animal designs and vegetal designs.

One more type of pottery, the Faiz Mohammad Grey Ware, also appeared in this phase. The shapes included deep open bowls and shallow plates. The paintings include geometrical and naturalistic motifs. Quetta Wet Ware has also been found.

Clay figurines of human females and cattle have been found occasionally in this phase. House models, made of clay, have been unearthed. Interestingly enough, the walls are

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painted in black-on-buff style with typical Quetta Ware designs. Fragments of clay rattles, button, a piece of shell bangle and bone or ivory beads have been found. Out of all the important objects the discovery of a small clay seal of the compartmented variety is of great significance since it has parallels in south Turkmenia. Copper artefacts, notably a dagger or

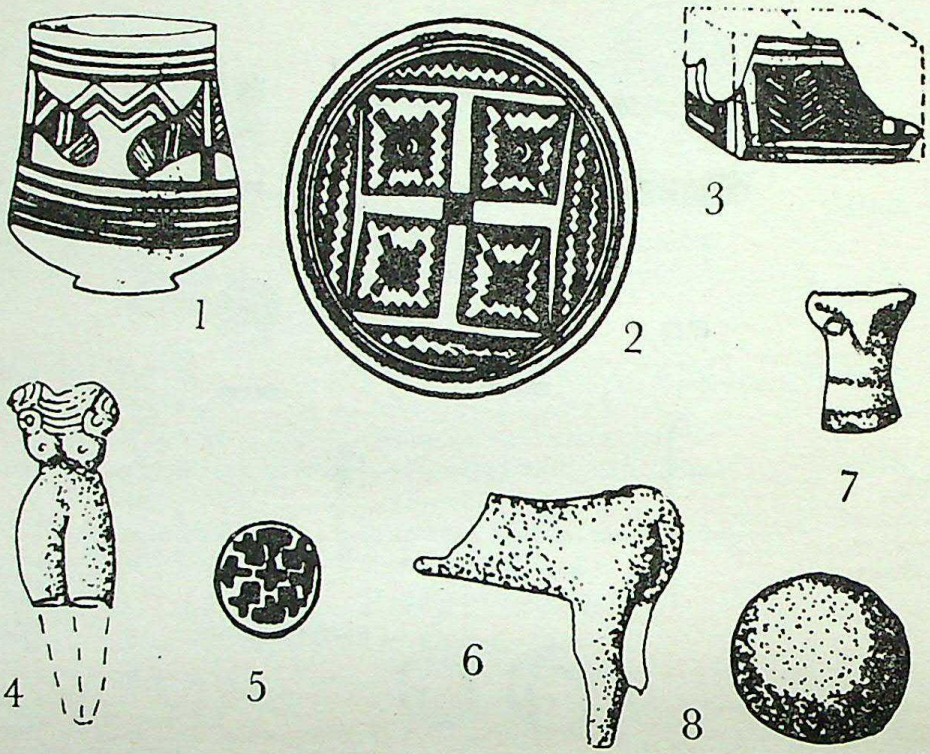


Fig. 3.15. Damb Sadaat II (Early Bronze Age): Painted pottery and other artefacts 1-2 Pottery; 3 Model clay house; 4 6-7 Clay figurines; 5 Stamp seals; 8 Clay ball.

knife and some copper fragments occurred in this level. Bone industry continued on a large scale as the bone points or awls and spatulas are frequently found in this phase. Added to it, as many as fourteen pieces of alabaster vessels have been unearthed. Grinding slabs have also frequently occurred.

**Period III**

This period is marked by the remains of a monumental mud-brick building, probably some ceremonial architecture consisting of a square platform with drains and foundation deposits. It indicates that DS III period was an advanced stage of chalcolithic culture.

The pottery unearthed in this phase is called Sadaat Ware. 'It appears that some forms were adopted from the Quetta people by their dispossessors for example, the biconical jars and some of the beakers. However, Sadaat Plain Ware and Painted Ware both are very distinctive. Sadaat Ware has only four basic motifs, all curvilinear.'

Clay female figurines and animal figurines of bulls, dogs, etc. are very common in this

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period. Models of houses, bone spatulas, bone points, compartmented seal, fragments of alabaster cups, pottery stoppers, clay bangles and stone beads, all found continuing from the previous traditions. Alcock reported a dagger point. A brooch fragment and pieces of copper objects have also been recorded.

**Karez (Q. 13)**

A low mound is located only twenty yards east of the Quetta-Sibi road in the centre of an extensive Karez system. It measured 45.72×12.20 m with a height of 3.5 m. A trench of 5×3 m was laid into the upper portion of the mound. On the basis of the pottery assemblage the excavator (Fairservis 1956: 197, 204) had assigned the period Damb Sadaat II for this site.

No complete structure has been exposed. The remains of hearth-fired brick and a number of localized blackened pebble areas evidenced the use of hearth at one time. The lines of small stones probably indicate the method, then prevalent, of using them as foundation for mud-brick walls. A number of hard clay floors were encountered during the excavations.

The pottery complex included bowls of the Quetta Wet Ware, jars and bowls of Quetta Ware, sherds of Faiz Mohammad Grey Ware.

Barrel form stone beads have also been reported from this site. Amongst them one lapis lazuli bead and one chalcedony bead are of special significance.

This site is a single culture site, revealing the material culture of DS II phase of the Quetta Valley sequence. During this period Quetta Valley reached the climax of its cultural formulations.

**Kechi Beg**

This small site is situated on the Quetta-Sibi road, just opposite the village of Kechi Beg. It measured 45.72×22.86 m. A trench 8×3×3 m was laid from the highest point of the mound to the virgin soil, reached at 2.52 m depth. On the basis of the pottery assemblage, Fairservis (1956: 204-222, 230) has correlated this site to Damb Sadaat I of the Quetta Valley sequence.

There are two building levels of Period I and Period II. However, there is no stratigraphic difference between these two building levels. Period I consists of a series of brick-walls at right angle. The technique of inter-locking brick courses is noted at the junction.

In period II a stone wall was unearthed.

The pottery assemblage of this site has not been described separately. However, the excavator referred to the abundance of potsherds of Kechi Beg Polychrome Ware and Kechi Beg Red Painted Ware.

It appears that it was a small village, developed during the middle of the fourth millennium B.C. and deserted after the Damb Sadaat I phase. It is a single culture site.

**Kile Gul Mohammad**

The mound of Kile Gul Mohammad is located about 3 km north-east of Quetta city. Before the discovery of Mehargarh, this was the only site which revealed the earliest occupational levels in Baluchistan, though in a limited fashion. The area of the mound is considerable and the maximum height is 8 m. Most of the area has been occupied by modern graves. Fairservis (1956: 222) laid some trial-trenches at this site in 1950-51. Four periods have been located.

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**Period I**

Period I, representing the earliest phase of 'Pre-ceramic Neolithic' can be dated to the seventh-sixth millennium B.C. though before Mehargarh was discovered, it was placed in the fourth millennium B.C. The excavated materials show huts of piśe and wattle-and-daub and domesticated goats, sheep and cattle. The presence of a few sickle-blades suggests that the people cultivated a cereal crop. The other lithic industry of this time included ground-stone tools and chipped flints. Not a single potsherd has been found.

*Fig. 2.16 A*

**Period II**

Period II is the ceramic neolithic phase which bears comparison with Mehargarh IIA. It can now be safely allotted to the end of the fifth millennium B.C. Earlier, it was placed in the second half of the fourth millennium B.C. In this phase, the inhabitants employed a crude handmade, sometimes basket marked, ware which they occasionally painted with simple wavy lines. Mud-brick houses were common though piśe was also equally common. Points and spatula-like implements of bone also occur in these levels.

This phase is widely represented in northern Baluchistan in the Zhob and Loralai regions at Periano Ghundai. Dabar Kot, Rana Ghundai I(a) and Sur Jangal, as also in Kalat, Anjira I and in Afghanistan at Mundigak I.

**Period III**

Period III represents the earliest chalcolithic culture—Mehargarh IIB dated to the beginning of the fourth millennium B.C. This period witnessed the emergence of wheel-turned pottery with open bowls in black-on-red pottery, known as Kile Gul Mohammad Black-on-red ware. The pottery designs included stars, triangles, hatched dots, suspended loops and vertical slanting lines.

*Fig. 2.16 B*

**Period IV**

Period IV represents the next stage in the development of chalcolithic cultures in Baluchistan. Damb Sadaat I is equivalent to Kile Gul Mohammad IV. This period is distinguished by the ancilliary use of red paint on pottery to produce a polychrome effect. White paint on a dark red or black surface was also used to create a fine and distinctive ware. Simple geometrics made up the designs; the vessels had shapes as deep bowls and vases and pedestaled cups and bowls. The black ware is unknown in the Kandhar region but is widespread in northern Baluchistan from Loralai as far north as Kalat.

*Fig. 2.16 C*

**Anjira**

The mound of Anjira, discovered in 1947, is situated 234 km south of Quetta and 26 km south of Surab, between the two arms of the Anjira river, a tributary of the upper Mula. It measures 228.6 × 106.7 m. The total deposit is reported to be 3.96 m.

Three trenches were laid by B. deCardri (1965: 94-103) along the south-western edge of the mound. The natural soil was reached in trench I and II, respectively at 3.20 and 1.83 m of depth. Trench III was an extension of trench II, laid to expose the uppermost levels of the mound.

The occupation of the site appears to have been continuous. On the basis of the movable antiquities and strcutural remains, the deposit has been divided into four periods: I to IV.

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Surface material is listed under Period V.

**Period I**

The earliest settlement on the site is just above the virgin soil and represents the semi-nomadic encampment of the Kile Gul Mohammad culture of Period II (upper levels) roughly dated to the early third millennium. In this period the site is devoid of stone or brick structures. The only remains yielded ashy earth with few stones which may be the domestic rubbish of a nomadic community. The pottery was of fine, wheel-turned, buff ware, often with a red slip, and occasionaly highly burnished. It was either plain or decorated with black lines. This ware has also been found at Kile Gul Mohammad. A few potsherds of well made grey and dark tan burnished wares are also there. Stone tools consisted of chert flakes, fine lunates, other microliths and many flakes. Bone awls and a spatula are further additions. Cattle and sheep bones were commonly found.

**Period II**

This period represents the permanent settlement of Kile Gul Mohammad II-III type. The boulder walls, with a central core of smaller stones of 8-10 cm maximum length, with a continuation in mud-bricks have been encountered. The pottery of Period I continued with the addition of a substantial proportion of cream surfaced handmade and basket marked wares. A bowl with high pedestal foot is unique in this context. It is of fine grey burnished ware decorated with punctuate hatching set diagonally and horizontally within triangular zones in a style. This ware is absent in Baluchistan. Several undecorated potsherds of the same ware have also been found. A single potsherd of Togau stage C was located in Trench II. Chert implements of Period I continued. Small finds included a shell or bone bead and two clay horns detached from a small bull figurine.

**Period III**

This period was the intermediate period when several changes had occurred. It was marked by a different architectural style. The construction of the walls altered considerably. Roughly squared stone replaced the rounded boulders and larger blocks were used dispensing with, to a large extent, the loose rubble fitting.

The pottery of this period included all the wares of the Period I and II. Of these the basket marked ware was very common. Togau Ware occurred sparsely and included one example of Stage A. Contacts with the new culture group can be attested with the appearance of Togau and Amri-Kechi Beg Bichrome and Nundra-Nal wares. A few sherds of a heavier, granulated ware and a colour coated and often cordoned ware, known as Anjira Ware, also occurred. The most noticeable point is the disappearance of chert implements. On the basis of this factor and on the discovery of a whetstone deCardi has concluded that metal was introduced in this period.

**Period IV**

In this period the settlement expanded to the south and the west. Structural remains consisted of fine squared masonry wall. The sizes of the blocks were more varied however, each one was well-shaped. The stone work changed to mud-brick about a little more than half metre above floor level and extended as foundations for the same distance below.

Due to the restricted digging, the complete plan of any of the houses could not be

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Due to the restricted digging, the complete plan of any of the houses could not be

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recovered. However, the houses appear to have been composed of narrow rectangular rooms of 3.05×6.1 m. A stone door-slab is partially excavated in Trench I and a stone-paved floor is reported.

The pottery of this period included colour-coated Anjira Ware (either ribbed or combed and cordoned) and Nal bichrome and monochrome wares. Apart from a couple of potsherds Zari and Togau wares, the pottery of the lower levels had died out completely.

Chert tools could not be traced. The artefacts included door sockets, a stone with a ground circular pit, large pulley-wheels and a few quern-stones.

**Period V**

Period V is based on the materials collected from the surface or found in superfacial layers in Trenches I and III. This material can hardly be encountered in undisturbed deposits. This material points to the contact with the people of Sadaat III and Rana Ghundai IIIC in northern Baluchistan. The most commonly used wares of this period are Faiz Mohammad Grey Ware, Quetta and Periano Wet wares and Periano Reserve Slip Ware. They suggest a small settlement of Rana Ghundai IIIC folk. However, the erosion had removed the stratigraphical evidence.

**Siah Damb**

Siah Damb is situated near the east bank of the Kej river, nearly 9 km south-west of Surab. During the field survey fourteen other prehistoric sites, including three large settlements and a few small sites came to light.

The mound measures 37.16 sq m, rising to a height of 12.2 m. Three small trenches were laid by B. deCardi to explore the nature of the mound. On the basis of the material three periods have been suggested (DeCardi 1965).

**Period I**

The material is too scanty to suggest any clue with certainty. However, it can probably be equated with Anjira Period II. Pottery consisted of a few handmade sherds, one basket-marked and a fragment of a coarse black-on-red ware.

**Period II**

Phase 1: Basket-marked and Kile-Gul-Mohammad Painted wares were common. A few sherds of a grey ware were found. A number of sherds of Togau B and a few sherds of fine bichrome ware have also been found. Some chert implements make the total assemblage.

Phase 2: In this phase a few changes have been noticed. Kile-Gul-Mohammad Ware became infrequent and basket marked ware had almost disappeared. Instead of Togau B now Togau C Ware appeared. These wares were accompanied by others, both handmade and wheel-turned, and, plain and painted. Painted Ware consisted of bichrome ware of Amri-Kechi Beg Ware type and a few sherds of Anjiran Ware.

Phase 3: The pottery of this phase is characterized by Anjira Ware, Zari Ware, and Togau D Ware. The painted pottery of this phase closely resembles the Nal-Nundara rather than the Amri-Kechi Beg pottery. A few sherds of typical Nal Polychrome Ware have also been found.

The other finds included the horn and head of a large bull figurine, a bone awl and an unpierced bone bead.

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**Period III**

The classification of this period is based on the collection of the surface material which is comparable to Anjira IV.

## SOUTHERN BALUCHISTAN

**Nal**

Sohr Damb, the site of Nal, is situated in the vicinity of village Nal in central Jhalawan. Its main axis runs nort-east and south-west and the mound attains a maximum height of some 12 m towards its southern end. The mound is situated amidst the cultivation.

In 1903 a small area of the mound was excavated by Mirza Sher Mohammad of the Gazetteer staff and 59 pieces of pottery from his collection were described by Sir John Marshall. In 1908 the excavations were conducted by the Hazara Pioneers under the command of Colonel Jacob and 250 vessels were further collected. Sometimes in 1923-24 the Bizanjau Sardar again excavated and gathered a few beautifully painted vessels. Due to these casual and a little ill-conceived, excavations a lot of pots were gathered but the mound was quite disturbed.

In 1925 Hargreaves, therefore, decided to conduct regular excavations at this site. The trenches were laid in Area A, B, C, D, E, F, G (Hargreaves 1929). In Area A Hargreaves laid two converging trenches (A & E) on either side of an old excavation made by Colonel Jacob in 1908. He uncovered a series of some fourteen rooms with stone foundations of mud-brick houses. No obvious entrances to the rooms can now be traced. No trace of any roofing material or charcoal of beams or rafters were discovered in this area. Most of the rooms had earthen floors.

Whether these stone structures were remains of a deserted and ruined habitation or whether these were designed for funerary purposes cannot be asserted. When excavated, the whole area was found devoted entirely to graveyard and human remains and funerary pottery were found down to the floor level. Very many burials were found in the excavations. These burials do not seem to be connected with the habitation. Pot burial was the rule, the exceptions being an adult and two children who were found buried individually in a little mud-brick chamber. The adult was partially flexed and lying on its left side. No funerary furniture was found with it. The greatest number of remains were fractional burials. Some of the body parts were found in vessels of the Nal Ware.

Beautiful vessels found with incomplete burials were usual. Other finds from the necropolis included 267 beads, several pendants, stone weights, grinding stones, marble ringstones, etc. But the most important objects found in the necropolis are copper and silver implements long narrow flat axes of copper and ceremonial spear-heads of silver.

Traces of stone wall have been encountered in areas B and C. The use of sun-dried moulded bricks is attested in Area B. No antiquity is reported from Area C.

In Area D the excavations have brought to light two more or less parallel walls of plastered mud-work. In continuation, four deeper and smaller compartments have been revealed.

Broken figurines of bulls, burnt animal bones, fragments of coarse undecorated pottery and a grooved disc of bone were recovered in these four little chambers.

In Area F, excavations discovered a rectangular chamber with walls of mud-bricks. The findings include a copper seal, a copper chisel, beads of different materials and two vessels different

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from necropolis pottery. In Area F, after the preliminary, cleaning, two small vessels and one larger shallow vessel were discovered. Later, three small rooms were disclosed. In cleaning these three rooms, beads of agate, carnelian, lapis lazuli and paste were recovered. Grinding stone with a grinder, two fragments of worked bone, a fragment of copper chisel and a white steatite press seal showing a vulture with one foot on a snake was found in this area. Twentysix vessels with incomplete burials were also found in this area.

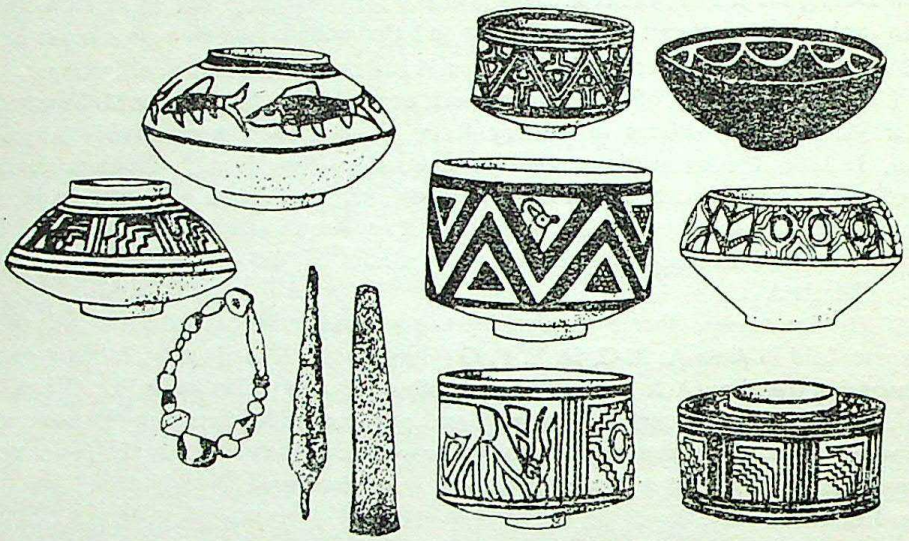

Fig. 3.16. Nal: Ceramics and other artefacts.

The only metals recovered at the site were copper and silver of which the former was used for tools and weapons, beads and copper seal, and the latter for a finger ring etc.

*Fig. 3.16* Beads of semi-precious stones such as agate, carnelian and lapis lazuli and the grinding stones, grinders, celts, pounding stones, rubbing stones, pestals have also been found in the graves. Shell bangles were limited. Only one small bangle and a few shell beads were recorded.

Terracotta figurines of animals were numerous in Area A and D. Except one of a ram, all were of the Indian humped bull. Besides this, there are biconical beads, hexagonal beads, cylindrical beads, and also disc bead.

*Fig. 3.16* *Pottery* The pottery assemblage is marked by the wheel-turned fine wares. There is a general resemblance amongst the potting but there are marked differences between the fabric and ornamentation of various types. The wares exhibit great variety in colour, ranging from greenish grey, through buff to a fine red. Pottery forms included open bowls with ring base, open bowl having a raised projection, tumbler-like vessel, canister like vessel with circular opening open bowl with wide mouth, squat pot with bulging sides meeting in a sharp edge, double pot with projecting flat handle, drinking cup with short solid foot. Little circular cups having sides nipped to form four sharp corners, miniature vessels with narrow mouth, shallow saucers with rounded rim, squat goblets with small foot, open bowl with curved sides and flat bottom, vase with narrow mouth and small solid foot, large open bowl

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with broad foot, small funnel, etc.

The pot decorations include paintings in yellow, blue, green and black but no single vessel has more than three colours in addition to sepia outline. The colours of these vases are not permanent and have been supplied after the vessels have been fired. Representations of the principal designs ranges from the simplest geometrical designs to the complicated geometrical patterns. Normally these designs consisted of horizontal bands, trapezoidal panels, intersecting motifs, fish, stepped designs, zigzag lines, etc. Animals and plant leaves are also represented. Animals included the humped bulls, cows, the Sind ibex, gazelle, fish, scorpion and birds.

Hargreaves believes that the inhabitants of Nal culture were nomadic and lived for half the year outside its highlands. In other words, it was a seasonal encampment, which, to our mind, is not a sound proposition because, in that case, this would not have been such an extensive cemetery.

**Kulli**

The prehistoric site of Kulli lies in Kolwa, an important region in southern Baluchistan. It is the largest single culture site in Baluchistan since it measures 121.92×91.44 m and is about 9.14 m in height. Stein (1931:118-12) explored the site and laid a few trial trenches. He had earlier collected black-on-red pottery, terracotta, painted bulls, etc. which looked like Mehi finds and, therefore, promising.

While digging, Stein cleared a stone wall structure containing some rooms located on the top of south-eastern portion of the mound. The rooms had no doors, steps leading upward indicate that it was a double storey building. Fairservis feels (1971:208) that it was a temple complex and these rooms were used to store grains. Within these rooms terracotta bull figurines, fragments of copper, lapis lazuli beads, bone bangles, a grater and a grinding implement were found. *Fig. 3.17*

The pottery included storage vessels decorated with raised wavy bands, and black-on-red canister jars decorated with bug eyed bulls, etc. similar to those from Mehi.

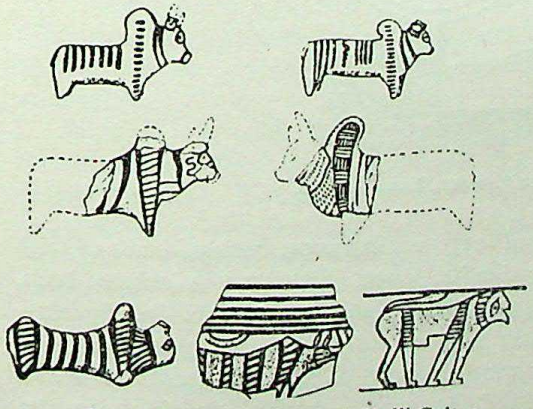

Fig. 3.17 Animal figurines, Kulli Culture.

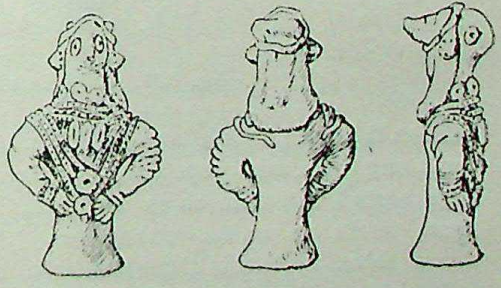

Fig. 3.18. Female figurines, Kulli Culture.

Another trench was laid in the eastern slope of the site. Terracotta bulls and female figurines were very common here. The pottery was similar to the previous one. Unpainted grey ware also existed though in limited numbers. *Fig. 3.18*

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**Mehi**

The habitational mound of Mehi rises between the foot of the precipitation cliffs of the Mehi hills and a stretch of fields to the north and west. The site is roughly circular and very large (109.73 × 100.58 m and 15.24 m high).

The surface has yielded the remains of stone walls and, plain and painted potsherds in abundance. Sir Aurel Stein (1931:154-163; also Piggott 1950:96-99; Fairservis 1971:205-208) explored the site for the first time and laid four trial trenches. Three trial trenches brought to light a cemetery where the remains of the cremated human bodies were buried, generally in cinerary vessels but sometimes in ground also. This practice was prevalent in Zhob and at Sutkagendor. The pottery assemblage associated with these burials included numerous small cups and jars (painted and plain), small dishes, high base of a painted bowl, a fragmentary little bowl of dark grey steatite with incised geometrical designs, tall elegant vases with a fine red slip, large conical cups, etc. The other finds include copper objects: mirrors, hairpins, bowls, discs, bangles, and a small neatly decorated bone stud or seal. Beads of lapis lazuli, terracotta female figurine and a small bronze bangle are also reported. The pottery from

*Fig. 3.19*

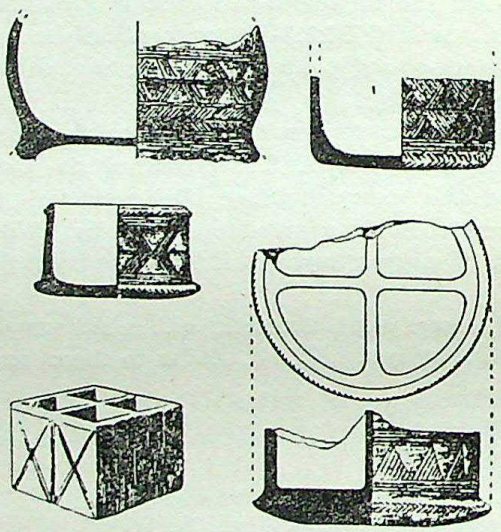

Fig. 3.19. Mehi: Steatite-chlorite vases, Kulli Culture.

trenches II and III include large goblets, triple set of large conical cups, painted bases of high tazzas or goblets, small cups and jars, little saucer like flat cups. Painted motifs included bulls, large horned mountain sheep or goats, birds, geometrical designs of straight lines figures—zigzag hooks etc. on the outer surface. The inner side of the dishes or bowls have well drawn fishes, mountain sheep and bulls. In the great majority of pots, the motifs are drawn in black over red or dark terracotta slip. A fine red slip is often applied on the unpainted vessels, otherwise the buff terracotta ground colour of clay is left on the surface of both painted and unpainted wares.

Trench IV was laid on the slope of the highest part of the mound. The excavations were carried to a depth of 1.8 m. Some rough stone walls were encountered at different

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levels. The pottery is similar to that from the cemetery. Terracotta figurines also turned up in abundance. Except for a few, they represent either humped bulls or busts of the mother goddess. Two terracotta rams are also recovered from Mehi. The typical Kulli design—bull standing between spiky trees and highly stylized ibexes are painted in black on buff jars recovered at Mehi. Similarly decorated potsherds were found in lower levels.

Some burial urns from Mehi recall common pots from Periano Ghundai. The female figurines of this site closely resemble those of Zhob valley. The bull figurines are, however, generally somewhat cruder than the Zhob ones but have parallels in Damb Sadaat III. The parallels of birds also exist in the Quetta Valley.

Fairservis (1971:207) observes that the funerary vessels and associated female figurines belong to a later phase of Kulli culture which was encountered in the earlier occupational phase. The earlier phase is characterized by more geometric designs and finer wares, including Nal types.

**Nindowari**

While working at Amri in 1961 and 1962 Casal visited and revisited a number of sites scattered along the borders of Makran in the Las Bela area and in Baluchistan along the Porali and Kud Valleys which form the natural throughfares towards Quetta in the north. He finally chose the site of Nindowari, discovered originally by R.L. Raikes, for excavations. The site lies in the vicinity of the Nindowari village and is called Nindowari Damb. It is located on the right bank of the Kud river, a tributary of the Porali. Nindowari is 250 km from Karachi, as the crow flies. The mound covers an elliptical area, measuring about 915 to 1098 metres on the main axis and about half that size from the west to the east. The remains of a number of stone walls were visible on the surface.

Excavations were conducted here from 1962 to 1964 by Casal (Casal 1966, 10-21) in different areas of the sites, mainly on the central mound (Area A, Area B, Area R and Area T, Area K.D.).

**Central Mound**

Careful cleaning in Area A extends over the south-eastern sector and includes more than a quarter of the central mound. It reveals a single monument, much dilapidated, more than once rebuilt and enlarged, the use of which seems to have been the same throughout its occupation.

Kulli pottery with typical motif, 'Animals in Landscape', painted around vases or inside dishes, with or without stem, is recorded. Animals, mostly bulls, are represented with elongated (strip) body and circular eyes ; they are often tied to an undetermined plant or object, and accompanied by birds, trees and foliage. Empty spaces are filled with stylized motifs, the meaning of which is not always clear. The decoration is painted either in black or dark brown on a cream wash and in that case there are often additional bands of light red colour or black-on-brick red background. Motifs like intersecting circles and pipal leafs are also reported on red polished slip. *Fig. 3.20* **Pl. 15**

Female figurines with bangles and necklaces and with elaborate headdress either alone or with a baby have been found (a few with cap—the Zhob characteristic). Bull figurines are reported in abundance.

In area B the stone lined rectangular pits have been discovered. This suggests that the building was used as a granary. These pits have some plant remains in the bottom deposits and

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saddle querns also.

The northern-most remains yielded a kind of building different from granaries. A smaller pillar or table made of stones with an elliptical arrangement of flat stones sunk in an ashy layer has been discovered. A thick wall forms the eastern limits of the granary which runs without a break northward. Only one door is found. The outer terrace on the east, is entirely made of burnt earth, interspersed with heaps of ashes and lots of broken vessels. Casal believes that

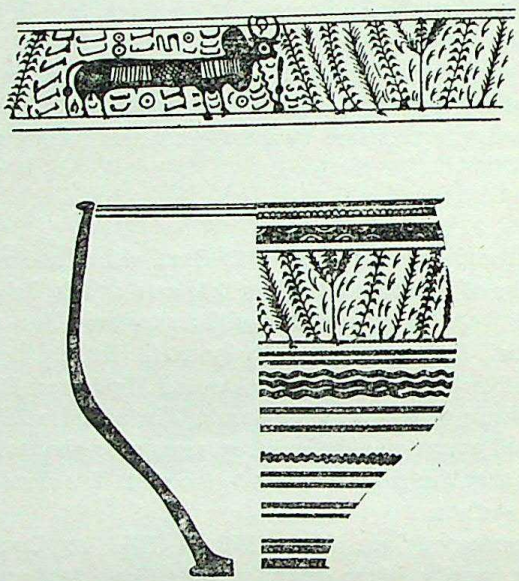

Fig. 3.20. Nindowari: Painted pottery, Kulli Culture.

this place looks like a place where people used to stay or to be kept waiting. The Kulli pottery has been found from this building also. The most significant discovery of this period includes three seals—two of them Harappan type with unicorn and Indus characters, and one circular with geometrical pattern. In all probability it is locally made, and despite its Jhukar look, it is likely to prove Kulli and Proto-Jhukar.

In Area R a wall made of stones set in mud plaster has been encountered. The remains of two square buttresses seem to show that it has been planned as a sort of rampart.

*Fig. 3.21* In Area 'T', the bases of small rectangular structures, made of stone, and located in one corner of the compound, could be seen. It has been built straight on the surface, without any foundation trench. Casal believes that those rectangles might then have been funerary monuments or cairns of a late date, as the pots with remains of bones are lying in these rectangles.

**Pl. 16** Excavations in the K.D. area revealed a massive three storied tower, step-wise built with intermediate terraces. The walls have a slight batter and their surface is lined with river boulders. A round bastion stands at the corner and a large semi-circular buttress protrudes on the southern frontage. On the top, a large room or an open platform with floors of rammed earth has been found. It has a deep cylindrical pit lined with stones. Its contents are made of ashes, potsherds and small particles of charred bones. The K.D. area is surrounded by a wall running north-south, and is traceable on the surface for nearly 460 m beyond the ravine.

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Here the pottery is not similar to the Kulli pottery. Most of them are wheel-turned but there are many handmade ones also. The paste, usually pink to brick-red, contains in abundance particles of grit and sometimes of grog used as temper. The vessels are covered with a thick slip of many shades from leather brown to venetian red on which designs are applied in

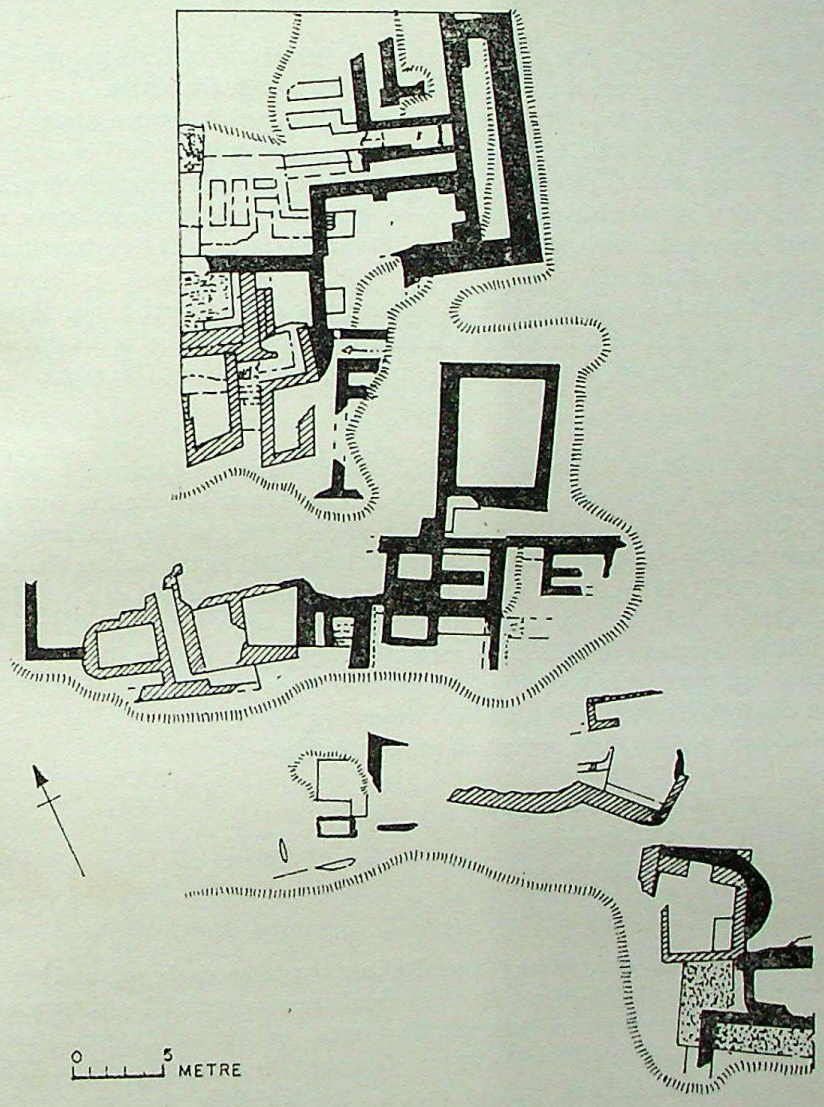


Fig. 3.21. Nindowari: Central Monument, Kulli Culture.

black dark brown or dark isolet. There are specimens of a whitish slip with bichrome decoration in black and light red and sometimes both were combined on the same vessel. Decorative features include geometrical patterns—spiral, naturalistic subjects like bird, turtles, foliage, etc.

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Shapes include basins, bowls, jars and footed beakers, and spouted vessels in the shape of ram's head.

Casal concludes that the maximum extension of the site was during the time of the Kullis. The site does not look like a town or dwelling place. He provided three alternatives—military, funerary or religious. He prefers the third alternative as a number of terracotta figurines, bulls, mother goddess figurines, the architectural layout, monumental structures with staircases, would suggest.

**Pl. 17**

Nindowari is primarily a Kulli culture site. A few sherds of Kulli pottery present the painted signs in single and groups that may represent some written characters.

A previous occupation has also been discovered in Mound A, from a boring on the outside of the quadrangular platform. They yielded pottery usually yellow buff in colour, sometimes pink with monochrome decoration in black, mostly geometric, carefully painted with thin strokes. It is identical with Nal. In addition to this, at various places stray sherds in polychrome Nal style have been discovered in disturbed layers. It has, therefore, definite relationship with the Nal culture.

What brought about the end of the Kulli occupation, we do not know. However, it is clear that after a long period of abandonment, a new people came and occupied this site.

The site was pre-Harappan, though partially contemporary with the Harappan.

**Balakot**

The site of Balakot lies in the middle of the Khurkera alluvial plains on the south-eastern side of the Las Bela Valley and Sonmiani Bay. It is situated in the Las Bela District of southern-most Baluchistan and is about 88 km north-west of Karachi. The excavations at the site were conducted by the University of California from 1973 to 1976 under the direction of G.F. Dales (1974 : 1-22 ; 1979 : 241-273). Balakot did not come in prominance till 1960 when Robert L. Raikes visited the site and pronounced that it was a Harappan seaport, since in Baluchistan District Gazetteer of 1903 it was mentioned only as an ancient site.

The mound measures approximately 180 × 144 m with an area at plain level of about 2.80 hectares. It is about 9.70 metres high from the surrounding plain.

Excavations have yielded three period sequence at Balakot

| | | |
|---|---|---|
| Period | III | —Post-Harappan and Islamic |
| Period | II | —Harappan |
| Period | I | —Balakotian |

**Period I**

It represents the earliest occupation at this site, just above the virgin soil and was designated by the excavator as Balakotian. The structural remains containing pottery and faunal remains on their floors have been encountered. They seem to be of domestic nature. Mud-bricks, measuring approximately 10 × 20 × 40 cm, were used for wall and pavings. The pottery is wheel-turned and decorated with painted motifs, familiar from the other early sites in southern Baluchistan. The most striking examples, present throughout this period, in both form and decoration, are directly related to the Nal Polychrome Ware.

"In broad terms our Period A (I) can be described as belonging to the basic Nal tradition of southern Baluchistan with infusions of other south-central Baluchistan tradition such as are best known from the Anjira sequence of Kalat", observes Dales (1974).

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Togau C style pottery has been found in the lowest levels of Period I and thus connects it with the Anjira ceramic traditions. The two occupational phases of Period I witnessed the presence of Amrian pottery in large number along with Nal pottery. Painted styles connect Period I with the Amri C and D.

Other finds included clay figurines of humped bull, chert/flint blades, edged tools, chipped stone stools and retouched microliths, lapis lazuli beads, shell beads, and beads of semi-precious stones and paste. Metal is very rarely used in Period I. For items of copper, bronze of undetermined shapes were found. The best preserved example is a folded strip with the cache of beads.

Potters' marks, either painted or incised on the pottery, are frequent. Animal and fish bones and shells constitute the largest body of the excavated material and it suggests that the people were meat eaters also.

**Period II**

At Balakot it represented the Harappan settlement. A few architectural remains encountered in the excavations, indicate that there was a wide east-west lane, almost bisecting the area at right angles to which are two smaller lanes. Mud-brick is generally used for building material; however, the hard fired bricks are used for drains and paving the floor. One beautiful example of bath-toilet rooms with a ceramic tub has been found.

Excavations on the south slope of the high mound have revealed five or six major construction levels of Period II. The remains are fragmentary. However, they indicate the existence of an elaborate monumental building.

One floor with impressed intersecting circles pattern, closely resembling one from Kalibangan is reported from the excavations.

One other interesting area on the high mound includes a large courtyard though the surrounding walls of this structure are missing. However, enough has survived to indicate a special importance for the structure. There is a building of non-residential character with a metre thick walls at the northern crest of the low mound. Large Harappan pottery kilns and smaller ovens are reported in the excavations.

*Pottery*

The pottery assemblage shows the Harappan character in basic categories of jars, pots, bowls, plates. The most important discovery of this period is of Kulli type pottery with painted terracotta Kulli bull figurines along with the mature Harappan pottery. It confirms the contemporaneity of the Kulli with the Harappan. One painted jar of Persian Gulf origin is found in Harappan levels.

Other finds include clay figurines—one female, one male, and others humped bull. Some are of Harappan and some are of Kulli type, chert/flint parallel sided blades, copper-bronze objects—spear points, arrow-heads and a small bowl preserving textile impressions on its under-side. One semi-circular flat piece of native lead is also reported. Other objects consisted of terracotta cakes, small clay gaming pieces, cubical stone weights, etc. *Fig. 3.22*

Shell bangle industry needs a separate mention. Apart from utilizing the fish and mollusc shells were used for manufacture of bangles and also probably inlays for wooden furniture. Working floors associated with mud-brick structure in the upper-most Harappan levels on the high mound were covered with large quantities of shell bangles in all stages of manufacture.

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At least five classic Harappan stamp-seals have been found at Balakot. Four of them depict the unicorn along with Indus inscriptions, while the fifth seal has a different animal, having a bull like body, a deeply folded neck and the non-bull head with large forward curving horns which is rare on Indus seals.

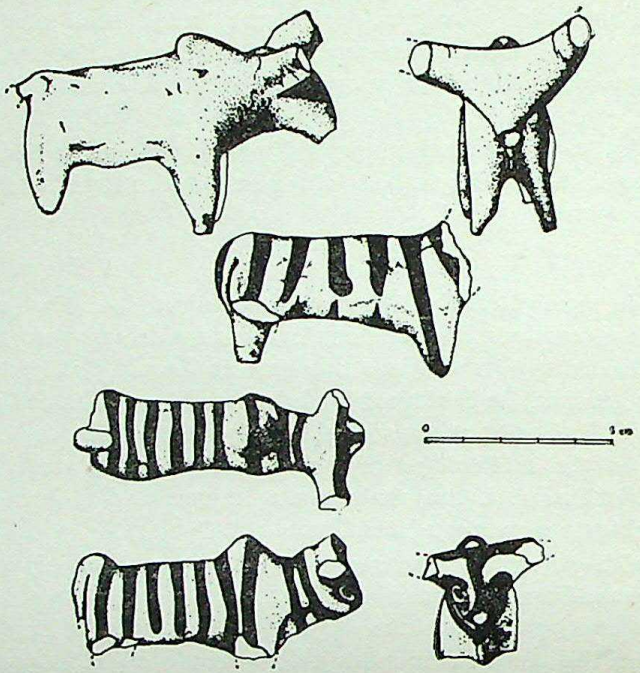

Fig. 3.22. Balakot: Animal figurines, Kulli Culture.

On the basis of radiocarbon dates, the Period I deposits have been dated to 3500 B.C.-3000 B.C. (without MASCA corrections). These are unexpectedly early dates for Period I, although not altogether off the mark.

The true potentiality of the site lies in the nature and composition of Period I Complex in which Nal and Anjira pottery of southern Baluchistan predominates. The contribution of Period II, on the other hand, lies in the Harappan's direct relationship with Kulli.

**Amri**

The discovery of Amri Ware at the site of Amri in 1929 added a new dimension to archaeological history with the discovery of a culture older than Harappan. The site lies some 130 km south of Mohenjo-daro in a semi-hilly region on the western bank of the Indus and opposite Chanhu-daro.

In 1929, N.G. Majumdar laid trial trenches on Mound B. Unfortunately, time limited his further explorations of this site. Thirty years later in 1959, a French Mission excavated this site under the direction of J.M. Casal (1964 ; 1979 : 99-112). He campleted it in 1962. There are two mounds at Amri : the main one, Mound A is about 12.2 m; Mound B is not higher than 4 metres. Majumdar's excavations were confined to Mound B but Casal excavated both

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mounds. A detailed study of the material confirmed that the earliest settlement (IA & IB) was confined to Mound A, and that later occupations (IC & ID) extended to mound B. The two mounds must have formed a single settlement that was later cut into two by floods of the nearby river.

The long duration of occupation at Amri has been separated under five period heads :

| | |
|---|---|
| Period V | —Muslim |
| Period IV | —Jhukar & Jhangar |
| Period III | —Harappan (Period III a-c) |
| Period II | —Transition (Period IIA to IIB) |
| Period I | —Amrian (Period IA to ID) |

We will concentrate on the first period.

**Period I**

Period I pottery witnessed all the evolutionary stages. This period has, therefore, been divided into four phases : IA to ID.

The ceramics of Period I are handmade pottery jars and bichrome decoration in black and red. The painted motifs are geometrical and rough. The most characteristic feature of the period is the simultaneous use of painted and 'guilloche' decoration. Togau C Ware has also been found. A few pots and vases are wheel-turned, thin-walled and carefully decorated.

Other evidence includes a few scraps of copper, many chert blades, stone balls, a few terracotta beads and rare specimens of terracotta, or shell bangles. According to Mughal, the Kot Dijian wheel-turned globular vessel with a wide band around the neck is reported from this phase. No structural remains have been encountered here.

Period IB witness structural remains of mud-bricks. Room XCII is noteworthy for its irregular brick sizes. Pottery changes marginally and a few types disappear. Togau C pottery is gradually replaced by designs of angular strokes in rows. The most important motif of this phase design on a leather bases and disposed on either of a double band. The design is thick and heavy and the triangles have a red filling. Between them are various patterns of broken or wavy lines in groups, ladders, etc. For the first time dishes-on-stand appear. Chert blades are reported in abundance and bone tools are just a few.

Period IC and ID appeared on both mounds. Period IC was the peak of Amri Culture. Two types of habitational remains have been encountered. The first one has rectangular houses of various sizes with doors ; and mud-floors are sometimes a few inches higher than the outside level. These floors often contain evidence of daily life : jars, fire places, etc.

The second type is very different indeed : usually rectangular and made of mud-bricks, the buildings are internally divided into small cells—too small for anybody to live or sleep in, and no doors apparently. Some of them had, from the start, been filled with earth, bricks or brickbats, others are empty. In both cases, refuse and ashes were found against the walls on the outside. According to Casal, these may be basements.

In Mound B, chert blade flakes and cores are in great abundance. Mound B was thus a craftsmen area.

In this phase, pottery reaches its technical and decorative peak. More than half the pottery is wheel-thrown. Geometrical designs were painted on. A net motif with the triangular black half filled in on one side was commonly used.

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Phase ID is the immediate continuation of Period IC. On Mound A, all the older structures were replaced by new ones. There is another large compartmented building erected with a slightly different perpendicular. The special feature of this building is six cells which seem to have been used as store rooms. Two of them had a communicating door. The walls of the cells had been burnt red as if the house had collapsed in flames.

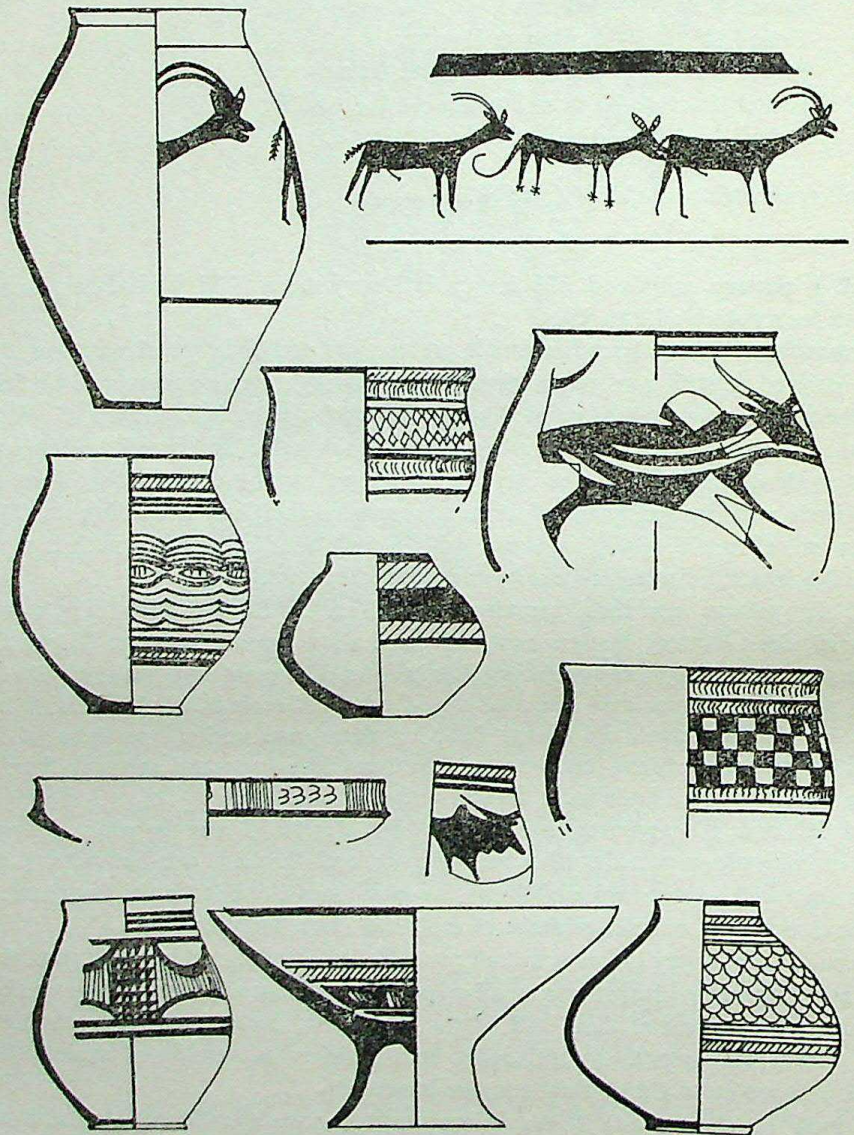


Fig. 3.23. Amri Ware. Representative types.

The pottery improved further. Red colour is now used not only in decorative bands but also in filling the designs. Animal designs are frequent decorations. Mughal sees Kot Dijian

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pottery in Amri ID also. The fish scale motif made its first appearance in this phase.

This phase provides evidence for frequent contacts with neighbouring cultures of Baluchistan and even with Afghanistan. Casal reports that a few specimens of Harappan pottery also appeared in the upper layers of this phase.

Amri ware is characterized by wheel-turned, rimless vessels in buff decorated in a black coloured zone of geometrical designs with plum-red bands above and below. Casal finds this pottery similar to the bichrome wares of Kechi Beg. However, he feels that their origin lies in the bichrome wares of Period IA and IB and not in Kechi Beg. *Fig. 3.23*

**Period II**

Period II at Amri continues Period I. It has two sub-phases Period IIA and Period IIB.

Phase A is in Mound A in a single structural level of which very little remains. In pottery, two Harappan types are clearly gaining popularity. At the same time, many shapes and designs of Amri cultures are still in use. Phase B appears on both mounds. In Mound A, remains are on one level only. Bits of wall have been found all over the excavations but the main finding is a platform, twice enlarged, made of mud-bricks, with post holes on it. Two structural layers have been traced on Mound B. The second possibly represents the remains of a rampart.

According to Mughal, pottery in this period includes two Kot Dijian designs : nos. IV and I, which in Amri IIB, existed in association with intersecting circles.

The upper layer are dark and ashy but, mostly are so close to the surface that it is difficult to say if this indicates destruction by fire.

**Period III**

This period heralds full-fledged Harappan occupation and is divided into three sub-phases.

| | |
|---|---|
| III A | Harappan |
| III B | Transition |
| III C | Late Mohenjo-daro |
| III D | Jhukar |

In Period III A, Harappan pottery abounds. The shapes and motifs are typically Harappan.

Period III B continues all Period III A types and a few new ones like small basins with an everted rim and a high pedestalled dish-on-stand. Kot Dijian pottery was also present.

The third phase of this period corresponds with the Late phase of Mohenjo-daro and does not concern us here.

At the time Amri was founded, it was a small settlement but, soon after, in Amri IC, the village expanded both in size and prosperity. At the end of Amri ID, for the first time, Harappan ware appeared. The village already extended to the maximum extent now known. These pot-sherds seem to have been imports and probably from Mohenjo-daro.

Immediately after the first appearance of Indus pottery in period IIA, the habitation shrinks and only traces of habitation are found in Mound A. But, in period IIB, it regains its status and Indus products are more numerous. At the beginning of Period IIIA, the settlement turns completely Harappan.

There are two radiocarbon dates available for Amri IB and IC which keep Amri within the time limits of 3015 to 2450 B.C. which is also confirmed by relative dating. However,

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MASCA correction dates it back to the 3700-3000 B.C. bracket. The chronology of this area is still open for discussion but the corrected dates seem nearer the truth.

**Kot Diji**

Kot Diji is situated 25 kms south of Khairpur, under the shadow of a medieval fort, built on a rocky precipice of the Rohri-Sukkar towards the south. The excavations were conducted by F.A. Khan (1965: 11-85), which lasted from 1955 to 1957. The excavation was however limited.

The mound consists of two parts: one comprising the so-called citadel, and the other, the lower city. The main axis of the 12 metre high mound runs from the east to the west; the mound itself measures some 183 m in length and more than 122 m in breadth. Two areas were selected for excavation: Area A—on the top of the eastern slope of the mound, measuring 48.76 m by 12.19 m, and Area B, at the foot of the mound, on the eastern side, measuring 48.76 m in length and 42.67 m in width.

Excavations in Areas A and B have yielded the complete cultural sequence of the site. *Fig. 3.24* It has a 5.19 m thick deposit at the citadel mound, revealing 16 main levels, with a few subsidiary layers, all numbered from top to bottom. The top levels, 1 to 3 at Mound A represent Harappan occupation: 3A is burnt layer, which intervened between the Harappan and Kot Dijian levels. Levels 4 to 16 are called Kot Dijian, a cultural phase, prior to the *Fig. 3.25* Harappan Mound B yielded the remains of the lower city: and the levels 1 to 5, along with subsidiary layers, are also numbered from top to bottom, According to Mughal, level 7 of the citadel (Mound A) is contemporary with level 5 of the Lower City as (Mound B) both of them have revealed similar terracotta cakes, etc. In Mound B, layers 1 and 2 have yielded the Kot Diji pottery along with the Harappan pottery; layers 3, 3A, 4 represented exclusively the Kot Diji complex. Layer 5 shows the remains of the earliest settlement of the Kot Dijians.

This cultural sequence confirms the views that the original settlers of Kot Diji were the non-Harappan people who manufactured a thin and light type of pottery with short everted rim and broad bands in different shades at the neck on the pinkish slip. The original home of these settlers is not yet clear but at least some of them appear to have come from Amri in the south and some from northern Baluchistan, from places like Periano Ghundai. In other words, the Kot Dijians were intruders into the land; the Kot Diji culture did not develop at the site of Kot Diji.

**Kot Diji Culture**

Digging below layer 4 brought to light the evidence of a pre-Harappan complex called Kot Dijian.

**Pl. 18** Amongst the structural remains the most important is the defensive wall of mud-bricks built on stone foundation. The lower part was constructed with undressed limestone blocks and the superstructure with mud-bricks. It was provided with massive bastions at intervals. On the northern side, the defence wall has been cleared to a length of 32.40 m and its surviving height is 1.65 m. Residential quarters inside the citadel were built against it.

Inside the citadel (Area A), the structural remains were also of mud-bricks erected on stone foundations, and also massive walls of sun-dried bricks; bricks measuring 38.1 × 19.1 × 8.9 cm. Community ovens with mud-brick lining are common and a kiln with a well-

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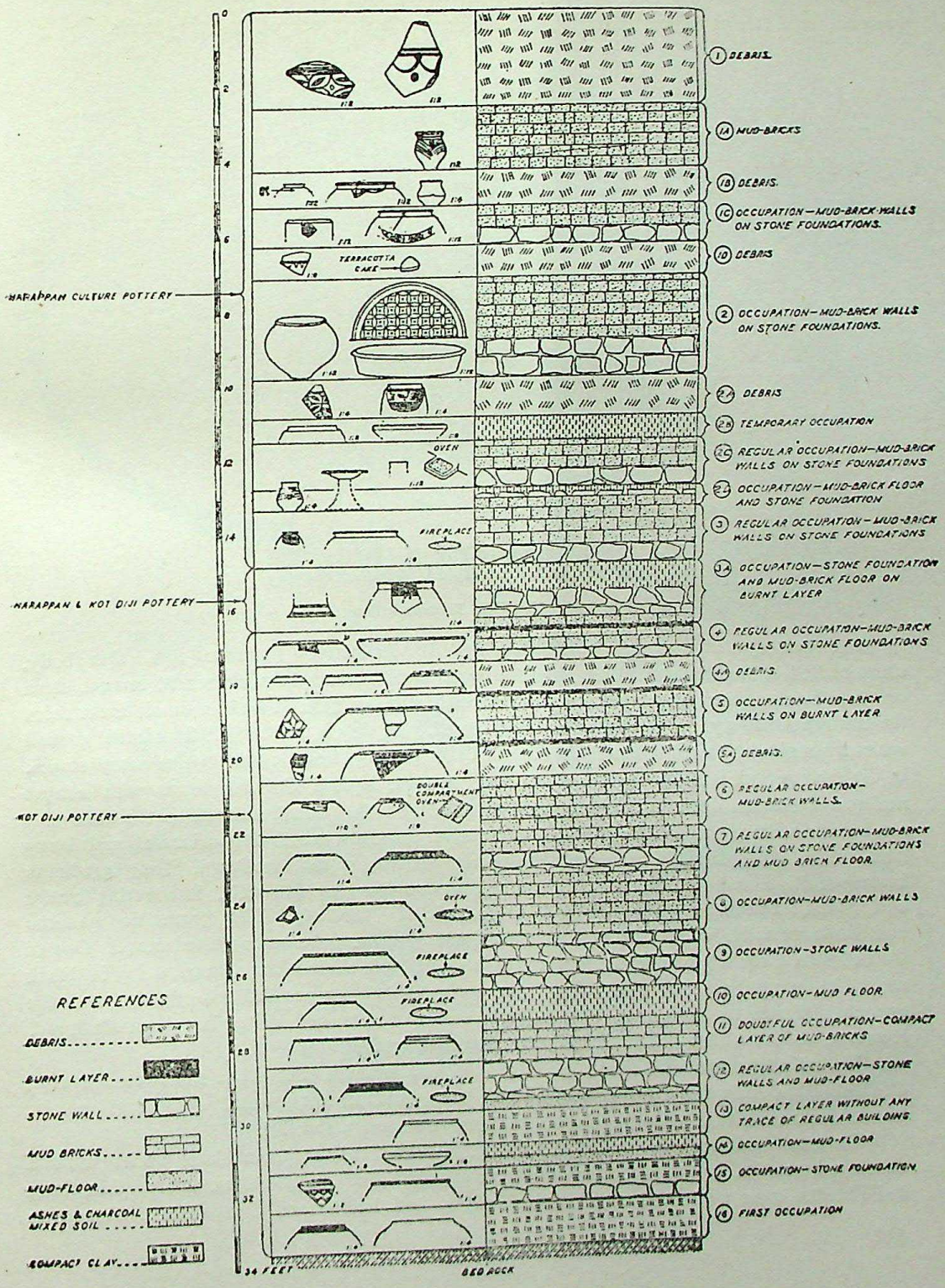
# Excavations at Kot Diji




The Kot Diji sequence showing Harappa and pre-Harappan 'Kot Diji' levels

Fig. 3.24. Kot Diji Cultural Sequence.

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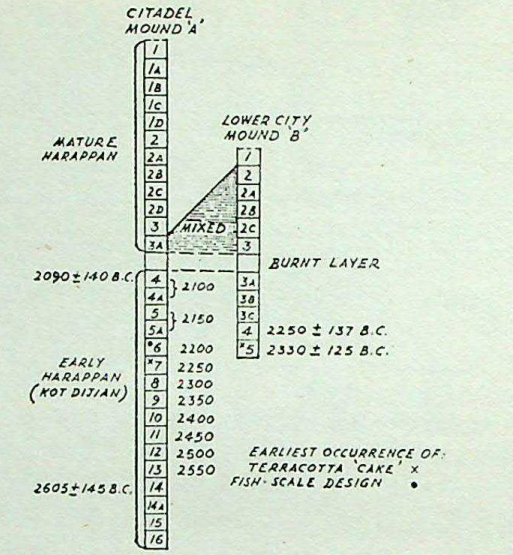
preserved lined funnel 107 cm in height, has been unearthed in one of the early levels.




SCHEMATIC CORRELATION OF STRATIGRAPHIC SEQUENCES AT KOT DIJI (AFTER MUGHAL)

Fig. 3.25. Kot Diji: Schematic Sequence.

*Fig. 3.26*

The pottery assemblage is marked by its distinctive features: fine thin body, short beaded or slightly everted rim, fugitive broad band around the neck in red, brown, sepia or warm black painted on a cream or dull red wash; slip was rare. It looks a lot different from the Harappan pottery. The pottery is wheel-turned. Its clay is well levigated and the ground varies from pinkish to red colour. At Kot Diji this pottery shows some evolutionary stages. In the early period, it is distinguished by thin texture, square globular forms with almost rimless and neckless open mouth, decorated with neck bands, In the later stages the neck and rim became more pronounced while new decorative elements, such as horizontal and wavy lines, single loops, roundels and simple triangular patterns were introduced. They gradually became multiple and complex, finally turning in the motifs like fish-scale, intersecting circles and linked roundels. The designs are painted carefully. The geometric patterns and bands are solid; hatched fillings being very rare, and there are no conjusted motifs. One of the full pots, a squat globular jar, is worth mentioning here since it has a horn deity in black and white on a dark brown glossy slip. The horns encircle six petalled sun flowers and the eyes are indicated by black dots. No animal, except the horned deity, has been observed. However, at Kalibangan this level has yielded animal motifs.

*Fig. 3.26 A*
**Pl. 19**

The main types included squat, globular vessels of medium size with a short beaded rim, dishes-on-stand, thin and delicate vases, flat based and straight walled cylindrical vessels, bowls, shallow plates of thin grey fabric, beakers, jars, covers and lids.

The small finds are very limited in number. However, all of them show variety and a developed technical know-how. Stone objects comprised fine micro-blades, sharp, thin, long knife blades, some with used and notched edges, and leaf-shaped arrow-heads. Terracotta

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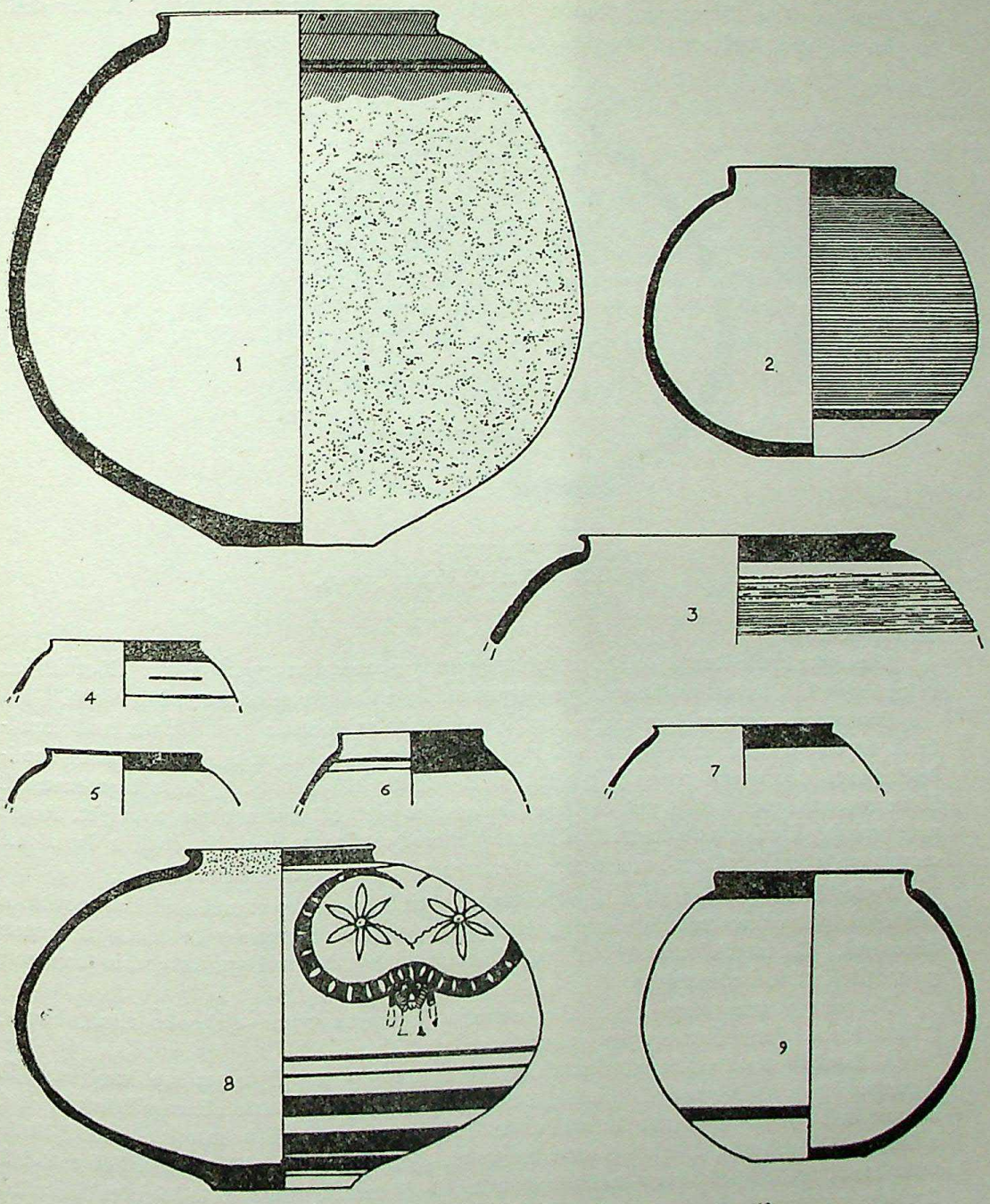


Fig. 3.26. Kot Diji: Kot Dijian pottery: Representative types and motifs.

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objects, very few in number, include bangles, cakes, cones and beads, and one fine modelled bull figurine. One fragmentary bronze bangle also comes from this level. A few shell bangles and beads, and one or two mother-of-pearl shells have been reoprted.

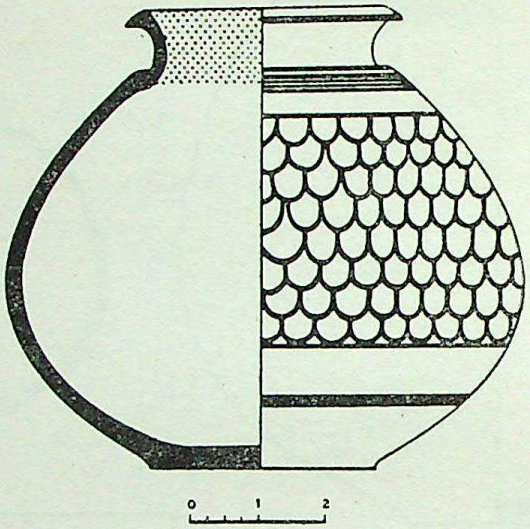


Fig. 3.26A. Kot Diji: Painted pottery.

**Harappa Culture**

The upper levels, from 1 to 3A, represent typically mature Harappan phase. Kot Dijian cultural deposits, from 4 to 16 levels, were separated by a thick layer of charred material.

Excavations uncovered extensive building remains with stone foundations and mud-brick superstructures, showing a well regulated town plan. Spacious rooms with mud-brick paved floors and properly bonded walls, 61 to 107 cm thick, have been exposed. Entrances to the rooms could not be traced out and no sign of drains came to light. Roofs were probably flat and were covered, with mud-plastered reed mats as it is evident from the excavations where a collapsed roof bearing the impressions of a reed mat was found.

Typical Harappan ware showing wheel turned, well fired, thick textured and heavy with a bright and glossy deep red slip showing Harappan painted decorations in black has been discovered. The motifs included *pipal* leaf, fish-scale, sun-symbol and various other common geometrical and incised patterns.

The pottery forms comprised of the common Harappan types—dishes-on-stand, bowls, goblets, beakers, basins, storage jars, cups, saucers and lids.

At Kot Diji steatite seals and terracotta human and animal figurines are very rare in Harappan levels. Only one seal depicting the unicorn and three terracotta female figurines and a dozen bull figurines have been found in the Harappan levels. The metal objects include a fine axe, arrow-heads, chisels and some bronze bangles. The stone tools consisted of polished mace-heads, leaf-shaped arrow-heads and other implements. Terracotta objects included figurines, plain and painted bangles, triangular cakes, beads, toys, etc.

Objects of mixed characters, both Harappan and Kot Dijian, were collected from layers

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3A to 3C above the burnt and charred line on top of layer (4) in the citadel area and layer (2) in the lower city area.

According to Khan, the Kot Dijian occupied this site around about 2900 B.C. The occupation lasted for a long time as the 5.1m thick deposit shows. The evidence of burnt layer suggests that the last occupation of the Kot Dijian was destroyed by fire. Did the Harappans do that or was it accidental ? We do not know for certain.

**Jalilpur**

The site of Jalilpur lies about five kms south of the left bank of the Ravi and at a distance of 78 km southwest of Harappa in the Central Indus Valley. At present the site of Jalilpur covers an area of 365.76×426.72 m with a maximum height of 4.57 m above the surrounding cultivable fields. The surface finds made it contemporary of Kot Diji, Kalibangan I, Pre-defence layers of Harappa. Thus, chronologically it belongs to the Pre-or Early Harappan period, assignable to the early third millennium B.C. The excavations were conducted by Mughal (1972: 117-124; 1974: 106-116).

The following cultural sequence has been established :

| | |
|---|---|
| Period II | Early Harappan |
| Period I | Late Neolithic |

**Period I**

No substantial remains have been encountered in Period I. However, the use of mud bricks and floors is attested. The pottery is mostly handmade and includes thick textured and tempered pieces of globular vessels with exterior surface coated with a mixture of clay and pottery bits. A similar pottery is reported from Amri IA and Sarai Khola I also. The pottery includes a few carinated cups, dishes and an abundance of potsherds of unrecognizable shapes. These are mostly of pale and red colour, light in weight and soft in texture as if unfired, bichrome wares painted black and brown or chocolate on red appeared at the end of Period I and became frequent in the upper levels of Period II.

The other finds of this period included a rectangular bead of gold sheet with tubular perforation and several barrel shaped cylindrical beads of terracotta, terracotta net sinkers, chert blades, numerous bone points and a large number of bones of cattle, sheep, goat and gazelle. The evidence of animal bones in large number makes us believe that these people were largely non-vegetarian. Like Sarai Khola I, no metal remains are noticed here too. However, chert blades of this period recall the chert blade from KGM I, Anjira I-II, Amri IA and Rana Ghundai I and suggest a common level of tool technology during the fourth millennium B.C. in the Indus Valley and Baluchistan.

**Period II**

Jalilpur had seen gradual growth of period II instead of sudden occurrence like Sarai Khola II. Among the plain wares of Period I at Jalilpur a small percentage of red slipped wares and those painted with black and brown or chocolate on red are present. In the early levels of Period II, these wares show progressive increase in number and mixed with the wheel-turned wares. However, handmade globular vessel with applique external surface persists throughout Period II.

Mud-brick structures are reported in Period II. The painted pottery includes black-on-

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*Fig. 3.27*

red, black-on-buff slip or on buff body, black-and-white wares Globular shape vessels with grooved exterior, short neck and painted with simple black band on the neck and

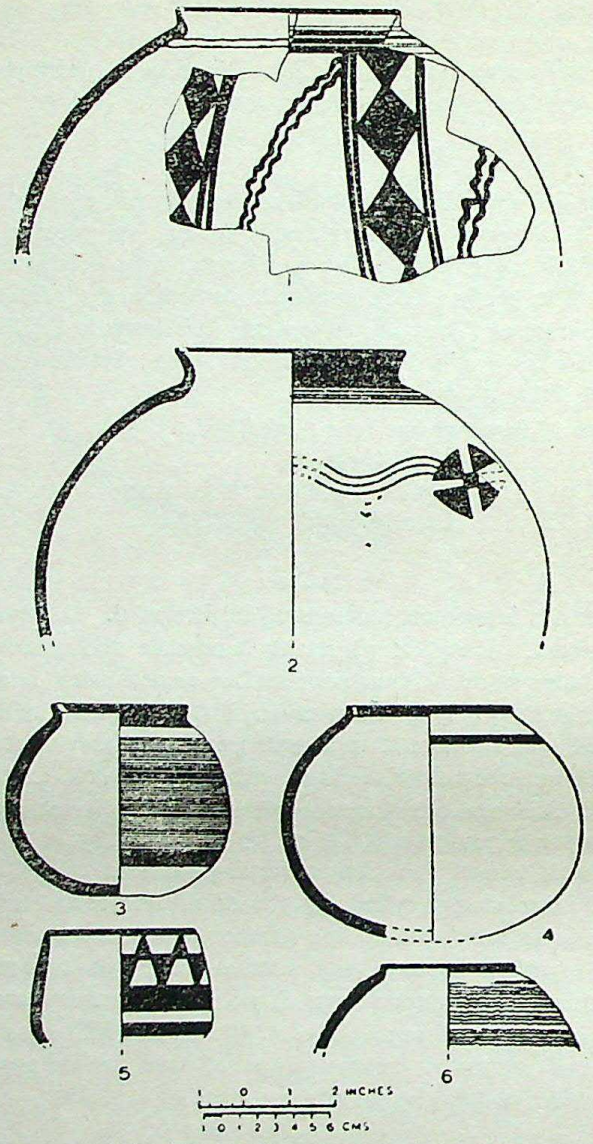


Fig. 3.27. Jalilpur: Kot Dijian pottery.

above the base are reported in Period II. This shape has a wide distribution. The flanged vessels in knobbed wares are also found in Period II. The bichrome pottery painted with black-and-brown or black-and-red is not found at Kot Diji but reported from Sarai Khola II, Gumla II-III, Periano Ghundai, Mundigak. This bichrome pottery has been found at Jalilpur II also. Mughal feels that the bichrome pottery tradition also spreads into the Indus plain through the Gomal Pass from perhaps the Amrian source. He connected the painted designs

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with brown or black-on-buff of Period II with the ceramic tradition of southern Iran. The most characteristic pottery of Jalilpur II is the so-called Sothi Ware. The combination of white and black colours in painted designs on pottery is already known to us from Kalibangan I and Siswal A, Banawali I, etc. This has been reported from Jalilpur II. Black-on-red wares included tall and squat offering stand, interacting painted designs and open mouthed bowls. Straight and wavy horizontal decoration in relief on the external surface of the so-called 'Periano Wet' of Khojak Parallel Straited Wares.

Small finds from Period II include terracotta toy cart frames, wheels with a protruding hub, terracotta cakes, animal figurines (humped bull, etc.) copper or bronze rods, parallel sided chert blades, pestles, saddle querns, leaf-shaped arrowheads of stone, terracotta bracelets, either grey or red in colour, shell bangles and several beads of lapis lazuli. Female figurines are of special significance as they recall the figurines of Namazga III period, Shahr-i Sokhta, Gumla, Sarai Khola and Mehargarh.

Mature Harappan phase is not encountered here.

**Harappa (Pre-defence level)**

The site of Harappa is located on the ancient bed of the Ravi, a tributary of the Indus, some 25 km west-south-west of the district town of Montgomery, now in Pakistani Punjab. M.S. Vats conducted the excavations at this site between 1923 and 1934 and brought to light only the remains of Indus city. Since our interest lies in the pre-Harappan levels, excavations conducted by Wheeler (1947: 65-69 Pl. XXII) in 1946 at the defences, where pre Harappan pottery has been found, concerns us most. According to the excavator, the fortification belongs to the Mature Harappan period. However, Mughal (1970: 127-129) does not agree with this observation. He raises a number of questions due to the presence of Kot Dijian pottery in level 26, level 26A which are pre-defence in stratigraphic sequence and also in the actual building materials of the defences. He believes (Mughal 1970: 130) that an Early or pre-Harappan fortification existed at Harappa much before its enlargement or elaborations took place during the Mature Harappan Period. Fortification is after all not a unique feature of the Harappans. Kalibangan and Kot Diji both have yielded the remains of fortification walls belonging to the pre-Harappan Period. However, before anything is finally said, we require more information which can be gathered only if further digging is done at the site.

A total of one hundred and ninetyone potsherds belonging to the pre-Harappan occupation of the site had been collected by the excavator (Wheeler 1947: 91-96, Figs. 8 & 9, Pls. XL and XLII). He divided them in three groups; (1) thirty potsherds from level 26 which preceded the defences, (2) five potsherds from the building levels 26A; from the material which accumulated during the first stages of construction of the defences (3a) one hundred and fifty potsherds embeded in the actual make-up of the defences, (3b) six potsherds resembling the group (1) and (2) material among the Harappan pottery assemblage.

All the pottery is wheel-turned and well baked; the fabric shows varying shades of red. Major pottery types included globular vessels, plain or painted with horizontal black band around the necks, disc and ring based bowls, flanged jars and lids, small cylindrical cups, basins with slightly cordoned rim, an offering stand and a ringstand, large mouthed basins with flaring sides and large vessels of plain ware. A number of potsherds are painted with black horizontal bands and cross hatched lines and 'concentric circles' designs. Cord impressed horizontal line is also present on one potsherd. The motif of horizontal black band around the neck of the globular vases (Wheeler 1947: Pl. XL) is very typical of Kot Dijian

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pottery, which probably has been derived from the Periano Ghundai pottery, where this pattern exists in an earlier context.

The pre-defence pottery may, therefore, indicate the coming of a people from the west of Harappa although we are not sure whether they came from sites like Periano Ghundai in northern Baluchistan or from Kot Diji in northern Sind.

**Banawali**

The site is located on the middle-upper course of a tributary of the Ghagger, identified as the Rigvedic Saraswati which is now a dried up river, merely a storm-water drain, known locally as Rangoi or Nali or Hakda Ben. The mound of Banawali lies 15 km north-west of Fatehabad, a Tehsil Head-quarters of Distt. Hissar, on the Delhi-Fazilka National Highway. Fatehabad town, on the other hand, is located 219 km from Delhi and 300 km from Chandigarh. Although a part of the mound has been eroded and badly damaged by the local agriculturists, still it covers more than a quarter square kilometre area. It rises to a height of about 10 metres from the present ground level, The site is being excavated since 1974 by the Haryana State Department of Archaeology. (Bisht 1976, 1977, 1982; Bisht & Asthana 1979)

To begin with, the site was first occupied by the pre-Harappan Sothi or Kalibangan I people whose remains rose to the height of about three metres. At that level were found, for the first time, a cluster of antiquities designated as 'Harappan'. Along with the appearance of movable antiquities of a new kind, structural changes and developments have also been noticed. The new cultural form continued for much longer a period than the earlier one since we have the accumulation of cultural debris running into about seven metres as against only three metre deposit of the earlier phase. Upto this point, the sequence of cultural succession at Banawali is, therefore, the same as it has been found at most of the sites in the Ghaggar System, including the site of Kalibangan. But after this Banawali has something more to give: a post-Harappan assemblage of pottery from pits on the main fortified area and habitation beyond it. Sometime, it is also called Late Harappan—a red ware with simple paintings in black.

**Period I: Pre-Harappan, Sothi Culture**

The township of Banawali, as said earlier, was established by the pre-Harappan Sothi people. What is significant to point out is that from the very beginning the settlement was planned. although due to the restricted area available for excavations, as a result of the overlying Harappan structures, not enough evidence could be gathered to reconstruct the details of the planning of the first township. On the present showing, it only *appears* to have been surrounded by a wall, since it has not been confirmed as yet. However, houses made of moulded mud-bricks have been found in straight rows. A house usually consisted of a circular or oval hearth and or oven in one of the rear rooms. In one of the nearby rooms a silo, in the form of a circular pit, a metre or so in diameter and in depth, both, has been located. To begin with, the silos were possibly used for storing grains but later on some of them were turned into refuge-pits also. It is significant to note that here and there, along with the sun-dried bricks, kiln-baked bricks were also used. The brick sizes were that of Kalibangan pre-Harappan bricks. The material remains of the people include small implements of copper and low grade bronze as well as of bone and stone. Beads of semi-precious stones, terracotta and steatite; and bangles of clay and shell have also been found.

Pl. 20 But, probably, the most characteristic object for us is the pottery which also repeats the

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shapes, fabrics and paintings of Kalibangan I. The pottery has been divided broadly into two groups: the first is a pink-to-buff coloured, thin-walled, soft-fired light ware, consisting mainly of small to medium sized kitchen vessels, vases and jars, footed and ring based, but, usually with narrow and short rims. A large number of them were painted in black with dots, dashes and curves executed in white to high-light the black painted designs executed earlier. The designs listed so far show a preponderence of geometric motifs mostly consisting of volutes, series of wavy lines, obliques, balls, triangles and crosses as well as broad bands at the neck. The variety of designs clearly shows that all of them, cannot be grouped in definite known geometric forms. So far, stag, and insects, such as the bug, found at Kalibangan have not been met with at Banawali. Even floral designs are conspicuous by their comparative absence. It is significant to note that the occurrence of irregular marks on the surface of the pottery leading to uneven section indicates that it was made on a light wobbling wheel. Within this category falls a thick and sturdy ware also, with basins mainly, which is decorated with incised geometric decorations, usually done with reed.

The pottery of the second category is much more fine in texture and surface treatment. Even the colour on the surface is brighter (red) and evenly distributed. Obviously, this pottery was fashioned on a heavier and faster wheel and, therefore, it anticipates the Harappan Ware of the later period. It was also painted in black. Pots of this category include dishes-on-stand, basins, troughs, jars, vases, bowls, etc.

In this context may be mentioned the painting of a beautiful canopied cart, something like a *ratha*, with solid wheels. Similar to it has not been found at any site so far, even in the Harappan context.

Although our knowledge of this pre-Harappan phase at Banawali is very limited and fragmentary, yet, undoubtedly, it shows a very wide-spread and long-lived cultural facies. It is to be noted that like Kalibangan, there are absolutely no signs of gradual decay of this culture at the site itself. There was, therefore, no Late Sothi stage as such at Banawali, since the Late Stage had fully identified itself with the Harappan Stage.

**Period II: Harappa Culture**

The Harappan stage heralds the laying down of a very elaborate town planning, by almost completely discarding the Sothi stage town-planning, As we are already aware of the suddeness by which it happend, it is the most baffling issue of Harappan studies. Now, as said earlier, a sub-joined fortified township was conceived. The common man's area containing various house-blocks faced broad, uninterrupted north to south thoroughfares. The thoroughfares are met at right angles by east-west running lanes and alleys. The bipartite wall, which runs centrally across the mound from north to south, dividing the settlement into two halves, has so far been traced to a length of 105 metres and a height of over four-and-a-half metres. The average thickness of this wall is about 6 metres. It is significant to note that near about the centre of this wall is a narrow but impressive opening, possibly serving the functions of a postern-gate through which communications could be maintained between the two halves of the walled city. At one stage the gate was made 'pucca' by way of constructing a drain-like structure which was perhaps meant to let out the drain water also. That this gate was not for unrestricted movement of people has been attested by the discovery of a massive square bastion or tower built against the dividing wall at the entrance itself. This little evidence goes a long way to prove that the Harappan social structure was much more regimental than that of the Sothi period. Thus the change from the Sothi to Harappa was not only a cultural change but also, possibly,

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social and political.

At Banawali the housing units are quite big even when compared with the average modern dwellings in cities like Delhi. It consists of six to eight rooms, a couple of them being very large, besides a kitchen, a bath, and three to five cubicals, i.e., small rooms without doors which may have been used as stores to be reached with the help of ladders. The toilet contains a wide-mouthed pottery jar, perhaps used as a wash-basin, water from which was drained out through a brick channel into a sanitary jar placed outside in the street. The floors of the houses were plastered over with clay mixed with husk or even cow-dung. The roofs appear to have been flat, made of earth and reed over wooden beams which have since been decayed.

Like Kalibangan, except for drains, walls and bathrooms where water was constantly in touch with the floor and, therefore, burnt bricks had to be used of necessity, all the structures were made of bricks. In either case, however, the smaller ones measured $6.5 \times 13 \times 26$ cm, $7 \times 14 \times 28$ cm, $7.5 \times 15 \times 30$ cm, or $8 \times 16 \times 32$ cm and the bigger ones $10 \times 20 \times 40$ cm or $11 \times 22 \times 44$ cm. The former were used in the residential quarters while the latter were used in the city walls. As usual, the ratio remained the same whether it was a small sized or large sized bricks; 1:2:4.

The kitchen attached to a big room had a hearth and/or ovens and *tandoors*, i.e., underground cylindrical hearths. Storage jars have also been found but embedded in the ground, near the hearths. The excavators have also found charred barley grains whose species has been identified as *Hordeum vulgare* Linn. Animal bones, cut and thrown, mainly of cattle, have been found at various levels.

The implements include the usual long chert blades as well as copper and bronze arrow- and spear heads, chisels and fish hooks, razor blades, rings, bangles, hair pins, antimony rods, etc. These are typically Harappan, usually thin and light. A hair pin is of the double-spiral variety. A copper bead was found covered with gold foil. Besides these copper-bronze objects, there is a large collection of gold beads. The beads have, however, the largest variety even material wise: of agate, quartz, topaz, lapis lazuli, carnelian (including etched), faience and steatite.

Semi-precious stones, like agate, and even bone and ivory, were used for making cubical weights. A cubical weight weighing 0.216 gm (six time the weight of a rice grain) is one fourth of the smallest Harappan weight found so far.

The art objects are, of course, not of a sophisticated kind, only folk items have been found. Thus, there are terracotta bulls of a rather crude variety. Similar figurines of deer, dogs, rhinos, buffaloes, birds, etc., have also been found. All of them are hand modelled. It is significant to note that like Kalibangan, so far Banawali has also not yielded the mother goddess figurines well known from sites like Harappa and Mohenjo-daro.

But the pottery has been as sophisticated, both painted and plain, as it is found at other sites: same colour, same geometrical, floral and faunal designs (intersecting circles, checker-board pattern, honeycomb design, sun symbol, peacocks, *pipal* and banana leaves, trees, deer, stags, fish and flowers). Even the pot-forms show the same uniformity—'S' shaped jars, perforated jars, beakers, basins, goblets, chalice cups, handled cup, etc.

The final item showing uniformity in the overall cultural millieu is represented by the inscribed steatite seals with writing and animal motifs almost similar to those found at other Harappan sites.

Thus, Banawali is yet another site of Kalibangan type but with certain items of town-planning which are similar not to Kalibangan but to the coastal sites like Surkotada. In fact,

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the real dynamism of the Harappa Culture lies in its town-planning, one city was *similar* to the other but never *identical* since each one was conceived separately by the genius of its own citizens.

The culture-assemblage of Period II ends here without any dominant note of decay. Period III starts with a break in cultural deposition.

**Period III : Post-Harappan Culture**

Our understanding of the culture-complex of this period is extremely nebulous at present, although it should have been otherwise since its remains were found just below the surface. The reason for this lies in something very significant: the new comers did not occupy the main area of previous habitation. Therefore, diggers did not come across their habitaional remains in the centre of the mound. But something was found whose significance is becoming clear only now. A number of small pits were found with a few full pots in most of them—simple red ware jars with linear patterns, sometimes only a few parallel lines around the neck. Recently, however, habitational, remains and floors have been caught in a trench running across the area located, outside, the fortified mature-Harappan zone of occupation. Not much, therefore, is known so far about the culture of this period but whatever pottery has been found it can be said that the Harappan tradition is still lingering and, to that extent, the complex can be termed 'Late Harappan', which we must confess, is at the moment very fluid.

**Manda**

Manda is a 9.20 m high mound near the town Akhnoor, on the right bank of river Chenab in District Jammu. It abuts the foothills of the Pirpanjal range. It was excavated in 1978 by the Archaeological Survey of India under the direction of J.P. Joshi. The cultural deposits range from the Harappan times to the Kushan times. The Harappan deposits are confined to the lowest strata. It has been divided into two sub—periods—IA, lower, and IB, upper.

**Period IA**

The cultural deposit of this period ranges between 1 to 1.40 m. The bulk of the material, as usual, is represented by pottery of two distinct traditions: the Pre-Harappan Sothi traditions (dull-red thin ware with paintings in black with white strokes) and the Mature Harappan tradition (red-slipped sturdy ware with chracteristic paintings). It is, however, significant to note that the Sothi pottery in the lowest levels was limited to 15% to 25% which also slowly and gradually disappeared in the upper levels of Period IB. In this context, it may be noted that jars with thick painted bands, reminiscent of the pre-Defence phase of Harappa has also been present in this assemblage. Rusticated ware is also included in this gamut. The Mature Harappan pottery is, however, represented by jars, dishes, dishes-on-stand, beakers and goblets. Perforated jar is conspicuous by its absence while a sprinkling of associated grey ware is conspicuous by its presence.

One of the most important finds is, however, a double-spiral-headed copper pin, of a type found in West Asia and Central Asia also during the 3rd millennium B.C. Other antiquities include tanged arrow-heads of bone, terracotta cakes and bangles, pot-sherds with Harappan characters in grafitti, small ehert-blades, saddle querns and pestles, and a black-stone small squarish seal on which something was attempted by way of engraving it but abandoned after the first few strokes itself. Since the area for excavation in this level was limited, the

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excavators could not encounter any structure.

**Period 1B**

It is a phase which, to our mind, is a separate entity and should have been called Period III. The reason is that here we have a Late Harappan red ware mixed with plain grey ware, generally found associated with Painted Grey Ware. It means this is an overlap phase. The Harappan Ware is represented by dishes-on-stand typical jars and dishes but the absence of Mature Harappan beakers and goblets must be noted. The grey ware, upto 7% to 19%, on the other hand, is represented by straight-sided bowls and flat dishes.

It is significant to note that during 1975-77 Indian archaeologists have been able to locate a number of sites in Haryana and the Punjab on which there is the clear evidence of overlap between Late Harappa and Painted Grey Ware. The most prominent site is Bhagwanpura, located on the right bank of the Saraswati, in Distt. Kurukshetra. The site was excavated by J.P. Joshi.

**Balu**

The ancient mound of village Balu, measuring 210×180 m and rising to 4.5 m lies on Kaithal-Jind highway via Deban in Haryana. Although Suraj Bhan and Shaffer (1978:59-67) had explored the site in 1977, systematic excavations, though small in scale, were carried out at this site by Udai Vir Singh and Suraj Bhan (1982: 124-126) jointly during 1978-79 field season. Five trenches, each measuring 6×6 m were laid at different places on the mound. However, Trench A1, sunk on the top of the mound, has revealed the complete sequence of cultures, divisible in three following phases on the basis of pottery.

**Phase A**

Phase A is marked by one metre deposit. This is devoid of structural remains. The ceramic assemblage included pre-Harappan Sothi ceramics, mainly comparable with Late Siswal Ware (Suraj Bhan 1971-72:44-46). Terracotta bangles are the only other antiquities found in this phase.

**Phase B**

This phase has 2.20 m thick deposit and is characterized by Mature Harappan pottery along with the pottery of Phase A (pre-Harappan) and regular structures (monumental and domestic, both). A massive mud-brick plateform having ten receding courses of mud-bricks on either side has been also reported on the southern slope of the mound. However, its exact nature and plan have not yet been ascertained. Domestic structures were built of sun-dried bricks measuring 10×20×40 cm and 8×16×32 cm. A large number of moveable antiquities have also been found in this phase, such as terracotta animal figurines, bangles, toy cart frames, wheels, balls, triangular and circular terracotta cakes, discs, sling balls, nodules, bone points, stone balls, saddle querns and pestles, faience bangles, beads of semi-precious stones and faience, steatite disc-beads and a few pieces of copper objects. It was a Harappan Complex.

**Phase C**

Phace C, in its 1.30 m deposit, yielded pre-Harappan pottery, Harappan and a few late Harappan pottery fragments. Bara and Mitathal IIB (Suraj Bhan 1975), it may be noted, have

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revealed comparable motifs. In addition some structures have been brought to light, the standard mud-brick size used in them is 10×20×40 cm. A house-drain, built with wedge-shaped burnt bricks was also noticed here in this phase. Almost all minor antiquities of Phase B along with a few shell bangles continued to occur.

*Ceramics*

Two main pottery traditions occurred at the site: Non-Harappan and Harappan. According to the excavators, the Non-Harappan pottery is related to the pre-Harappan tradition of Indo-Gangetic divide and was used throughout the occupation. It is represented by red ware, buff ware, grey ware and a few sherds of black-on-red ware. All the six known pre-Harappan fabrics of Kalibangan have been noticed in these wares. However, it is significant to note that the typical white painted pre-Harappan designs have not appeared so far. The main pottery forms in red ware are storage jars, water vessels, vases, incised troughs, rusticated pots, bowls and cups. Painted motifs include broad black bands on the neck and shoulders of vases, horizontal bands, vertical oblique and wavy lines patterns, arched designs criss-cross and hatched triangles. Reserve slipped designs have also been found.

Harappan pottery, introduced in Phase B and continued in Phase C is characterized by thick sturdy vessels of medium fabric and classical shapes, including large storage jars, perforated jars, vases, dishes-on-stand, goblets, beakers and handled cups. Painted motifs included *pipal* leaves, intersecting circles, hatched leaves, horizontal bands, etc. Incised designs, cord impressions, nail marks, paring marks, etc. were also used by them to decorate pottery. However, Phase C has yielded a few new style red and buff ware sherds painted in black and white and sprinkler of late Harappan traditions, similar to Bara or Mitathal IIB shapes. The main shapes include dishes-on-stand with drooping rims and under cut projected rims, storage jars, rusticated *handis* and vases with high necks. Graffiti marks have been found both on Harappan and non-Harappan potteries.

The above details show that the Phase A belongs to pre-Harappan or Sothi occupation and during Phase B the Harappan occupied the site. However, the pre-Harappan continued to live side by side. Phase C, however, represents the degenerate phase of the Harappans.

**Mitathal**

The twin-mound site of Mitathal lies 10 km north-west of Bhiwani and about 1.5 km west of Mitathal village along the dried up old course of Yamuna in Haryana. The higher mound measures 5m in height and the lower mound measures 3m in height. The site attracted archaeologist through the chance find of two copper harpoons and thirteen copper rings. Excavations, done on limited scale, have been conducted by the Kurukshetra University under the direction of Suraj Bhan (Suraj Bhan 1969, 1973, 1975, 1976).

A two-fold sequence of cultures has been noticed: Mitathal II—further divided into IIA & IIB and Mitathal I.

**Mitathal I**

Mitathal I yielded about 1 m. of cultural deposit above the virgin soil. It is equivalent to Siswal B Phase. It yielded Siswal B type ceramics alongwith typical Harappan pottery, like dishes-on-stand, beakers and perforted jars, etc. (Suraj Bhan 1975:6). The structures were built of mud-bricks of 30×20×10 cm size. The same size is followed by the people of Kalibangan I. A limited number of other artefacts have been noticed in this phase: terracotta

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biconical beads, bangles (painted) a milling stone, a sandstone ball, a stone flesh rubber. An ivory pin and a fragmentary copper bangle. According to Thapar (1981:60), this was the period when the pre-Harappans and Harappan lived together although with a larger bias for the former.

**Mitathal IIA**

The settlement of Mitathal II A is a medium sized Harappan town falling between Rakhi Shahpur and Siswal B in area and cultural milieu and laid on the twin-mound pattern. Houses were built of mud-bricks. Two sizes of mud-bricks were commonly used: $40 \times 20 \times 10$ cm and $36 \times 18 \times 9$ cm. The same sizes are used by Kalibangan II people. The Harappan traits in the form of pottery (storage jars with wide mouth, jars with recurved rims, vases with beaded rim, dishes-on-stand, perforted jars, beakers, etc.), and other objects (bangles of faience and terracotta, beads of steatite, faience and semi-precious stones, terracotta cakes, animal toys, toy cart-wheels, cubical chert weights, etc.).

Siswal B traditions continued in Mitathal II A. They are marked by terracotta disc missiles with tapering ends, bangles, and biconical truncated beads, pure copper metallurgy and all the six fabrics of Siswal B ceramic. However, white paintings are absent in this phase. The fabric is medium to coarse and most of the pots were burnt to the red core. Dull red slip was applied to a number of vessels. The main types comprised vases with out-curved or out-turned and sharpened or oblique cut rim, vases with loop handles, bowls with flaring or flat topped rim and tapering or carinated shoulder and storage jar. Painted designs, which were commonly used, include black band at rim or neck, horizontal lines, wavy lines, lattice design, cross hatched triangles, dots, stags, scorpians, loops, hatched leaf and lotus stalk. Reserved Slip Ware was also known to them. Five copper objects have been found, a bangle, a ring and a long narrow object alone bear definite shapes.

**Mitathal II B**

Mitathal II B represents the phase of general deterioration in the material culture of the Harappans. Houses, streets, mud-brick sizes and other cultural milieu attest the continuation of Harappan tradition. However, the structures are not as solid as they were in Mitathal II A. The pottery shows the degenerate treatment and decoration and the appearance of some new forms like storage jars with collared rim, squat dishes-on-stand, bowls, etc. Stone objects included cuboid weights, balls, marbles, saddle querns and pestles. Terracotta objects are triangular cakes, bulls, rams, toy-cart wheels and balls. Beads were of barrel, cylindrical and disc shapes. These were made of agate, carnelian, faience, steatite and terracotta. Faience and terracotta bangles were commonly used. Two shell bangles are also reported. A celt, a *parasu* like object and a few bangles of copper are the other important finds.

There are three radiocarbon dates for Mitathal:

Mitathal I —1980±140 B.C. (PRL 290)
Mitathal IIA —1769±110 B.C. (PRL 291)
Mitathal IIB —4430±220 B.C. (PRL 292)
(Half-life 5730 years)

The date of Mitathal IIB has been rejected by the excavator on grounds of contamination. He puts the combined occupation of Mitathal I-IIa between 2100 and 1700 B.C. and assigns

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Mitathal II B, a post-1700 and pre-1500 B.C. date which is reasonable in the light of MASCA correction.

**Ropar**

The site of Ropar is situated near Ambala and about 25 km east of Bara. Three mounds, one large and two small sub-mounds, make the site. The entire area measures approximately 200 m north-south by 420 m east-west covering approximately 65940 sq m. The site was excavated by Y.D. Sharma on behalf of the Archaeological Survey of India in early 1950's (IAR 1953-54:67;1954-55:9; Sharma 1955-56; 1965; 1971-72; 1973; 1976).

Five major cultural phases are traced at Ropar: from bottom to top. They are

Period V —Mediaeval
Period IV —Kushan-Gupta
Period III —NBP
Period II —PGW
Period I —Bara and Mature Harappan

Period I is somewhat relevant to our study.

**Ropar I**

Sharma has noted three occupational levels in this period on the basis of ceramics. He compares the initial occupation of Ropar with Pre-defence Harappa, Kot Diji, Kalibangan I and Siswal B. According to him, the second level represents Bara material and the third is mature Harappan.

Shaffer (1981:78) has challenged the validity of excavator's views although to our mind Sharma may be right since in this region all major Harappan sites are found comfortably sitting over the pre-Harappan occupation, however small they may have been.

**Bara**

The site of Bara is located about 25 km north-west of Sanghol, near the village of Bara in District of Ambala. It was excavated by Y.D. Sharma in 1950's (IAR 1954-55:9-10; Sharma 1965,1971-72, 1973, 1967, 1982). Yet there is not enough published material regarding this site. The chronological sequence at Bara has never been defined except for a casual reference that there are fourteen stratigraphic units in 4 m deposit.

Bara is a single culture site called 'Bara' by the excavator. Thapar, however, observes "the antecedents of this culture are traceable to a pre-Harappan tradition. Harappan elements are also represented in this assemblage though in a transformed manner" (Thapar 1981:60).

The distinguishing feature of this culture complex was an individualistic pottery marked by a diversity in slips, paintings and new shapes. Another important feature was the incised decoration consisting of horizontal or wavy lines and checker board pattern. The Harappan goblets are there but rare.

Sharma (1973) compares the Bara Pottery with the Kalibangan I pottery though there are not many common shapes, e.g. globular jars with short everted rims are not there. Sharma further reports that amongst the six Kalibangan Fabrics A, C and E have not been found here (Sharma 1971-72:24) and Fabrics B, D and F occurred at Bara as comparable analytical category. It appears that Bara pottery is more distinctive than Kalibangan I ceramics. It

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looks closer to Siswal B and Mitathal IIA as Shaffer has rightly pointed out. But every thing said and done, the Bara pottery is most enigmatic and scholars have made a mess of it—it is included sometimes in pre-Harappan, sometimes in Harappan and at other times in late Harappan depending upon the personal views.

Numerous terracotta cakes, bangle pieces of faience and bronze objects are reported from this site. A furnace, similar to a furnace found at Kotla Nihang Khan, is located here. It is an overground oval structure built with the long axis of about 1 to 1.5 m and the interior is filled with fire blackened cracked rocks.

**Kalibangan**

The well known site of Kalibangan is located some 310 kms north-west of Delhi along the left bank of the now dried up river Ghaggar (ancient Saraswati) in the northern part of Rajasthan. It has been excavated by the Archaeological Survey of India under the direction of B.B. Lal and B.K. Thapar (1967:78-85; Lal 1979, 1981; Thapar 1973, 1975, 1981, 1984) for almost a decade (IAR1960-61, 1961-62, 1962-63, 1964-65, 1965-66). It comprises of two mounds, the smaller one (KLB 1) to the west and the larger one (KLB 2) to the east, somewhat similar to Harappa and Mohenjo-daro. The overall peremeter of the site is between 1.5 to 2 kms and its height goes to about 10 metres above the surrounding ground level. The excavations have brought to light a habitational sequence of two periods:

Period II (Upper Level)—Harappan
Period I (Lower Level)—Pre-Harappan

**Period I (Pre-Harappan)**

The Period I settlement goes back perhaps to 2900 B.C. and continues upto 2500 B.C. and Period II settlement is bracketed between 2500 and 1750 B.C. These dates are based on MASCA corrected dates. There is no break between the occupations of the two periods; they in fact overlap.

The pre-Harappan settlement was situated on the bank of the river, beyond the active flood-plain and was parallelogram, some 250 m from north to south, and 180 m from east to west. The settlement was fortified from the very beginning by a wall of mud-bricks. The houses were built of mud-bricks. The use of baked bricks is attested only in a drain. Due to limited excavations in the area of this phase, complete house-plans could not be exposed. However, it appears that the pre-Harappans lived in well laid out mud-brick houses, oriented roughly along the cardinal directions. The evidence of plastering the wall with mud and chaff is also noticed. An ordinary pre-Harappan house perhaps consisted of a courtyard and a few rooms along its sides. In the courtyard, ovens of overground and underground varieties have been found which clearly attest the cooking activities at the site, These ovens are similar to the modern *tandoors* of Punjab and Haryana. The cereals were perhaps ground on the saddle querns with mullers. The cylindrical pits, lined with lime plaster, were wide enough to store grains. They have been located in courtyards although no grain remains have been encountered in the course of the digging. However, there is ample evidence to show the well organised agricultural activities of these people. The remains of an agricultural ploughed field with intact furrow-marks have been noticed about a hundred metres to the south of the settlement (Lal 1979:69).

*Fig. 3.28*

**Pl. 21**

**Pl. 22**

Besides agriculture, cattle breeding and hunting were practised by the pre-Harappans. Meat, fish and fowl were equally important items of their diet.

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So far we are not aware of the system which the pre-Harappans adopted to dispose of their dead.

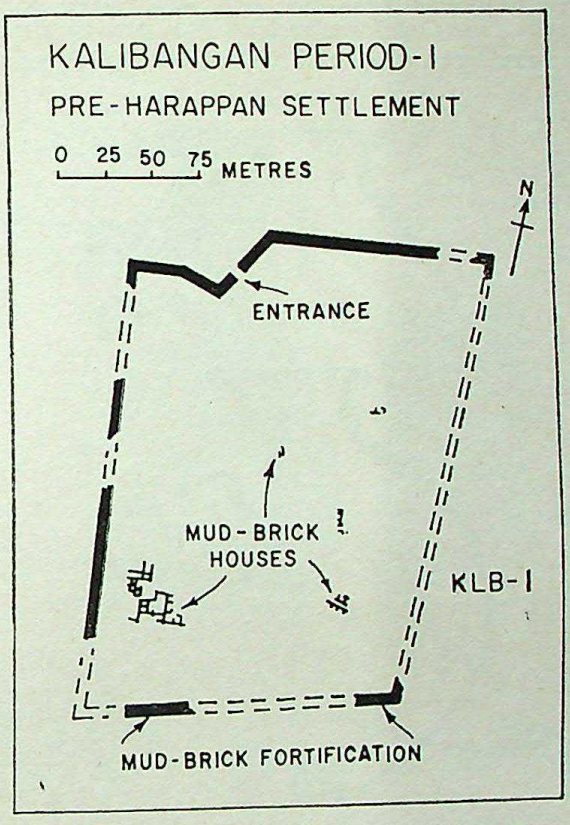


Fig. 3.28 Kalibangan I: pre-Harappan Settlement.

*Ceramics*

The most distinguished cultural trait is reflected in the ceramics on the basis of 'fabrics', a very unhappy use of the term in the present context because the term and the meaning attached to it are absolutely arbitrary (Shaffer 1981), perhaps, a neutral term, such as group, would have been better, it has been divided in six categories A, B, C, D, E & F (Thapar 1975: 21; Lal 1979: 70-74).

The pottery of Fabric A is marked by its unusual features which differentiate it from other fabrics. This was the most commonly used pottery. The vessels were turned on wheel rather carelessly, showing unskilled handling and weak, irregular striation marks. No slip seems to have been used, the colour of the wash being dull red to light pink. Two colours have been used for painting the pots—a basic black often supplemented with white. The use of white is the main characteristic of the pre-Harappan pottery, often called 'Sothi', at this site. The main painted motifs included semi-circular arches with the upper intervening space either hatched or filled, latticed triangles, rows of loops, fish-scale pattern. The common shapes of this fabric are vases with everted rims, globular body and disc/ring/pedestal-base, bowls and basins with convex or tapering sides.

*Fig. 3.29*

Pl. 23

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*Fig. 3.30*

Fabric B was distinguished primarily by its paste, texture and surface treatment. Here the pottery was carefully turned on wheel and was treated with red slip upto the shoulder; this area was decorated with paintings done in black. The remaining surface of the vase was covered with a thin sandy clay solution and while wet, seems to have been roughened by horizontal or wavy combing or by tortoise shell or dendrilic impressions. The painted designs included

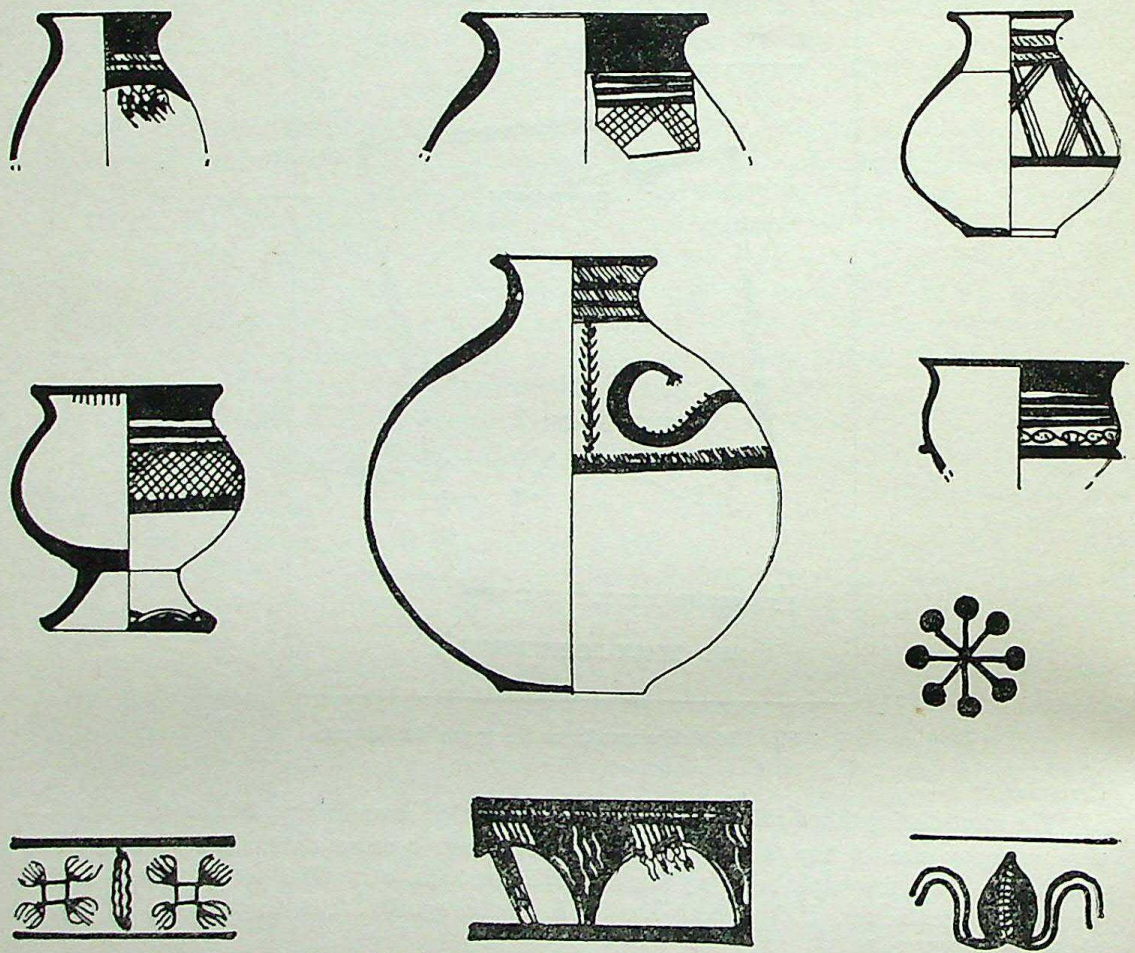

Fig. 3.29. Kalibangan I: Painted Pottery Fabric A

floral, animal and bird motifs in black. This fabric is represented only by a large jar with globular body and everted rim. The surface treatment of this fabric recalls wet wares, including Khojak Parallel of the Quetta region.

*Fig. 3.31*

Fabric C was marked by a fine texture, smooth and slipped surface in various shades of red. It is nearest to the Harappan pottery. The painted motifs included horizontal bands, loops, criss-cross, borders of plants, fish-scale, metopes, pendent, triangles, etc. The shapes comprised globular and ovoid vases with disc bases, lids, straight sided bowls, dishes and offering stands.

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Fabric D was characterised by a thick sturdy and a red slipped surface. The common shapes are heavy jars, troughs and basins. The interior of the basins were decorated on the *Fig. 3.32*

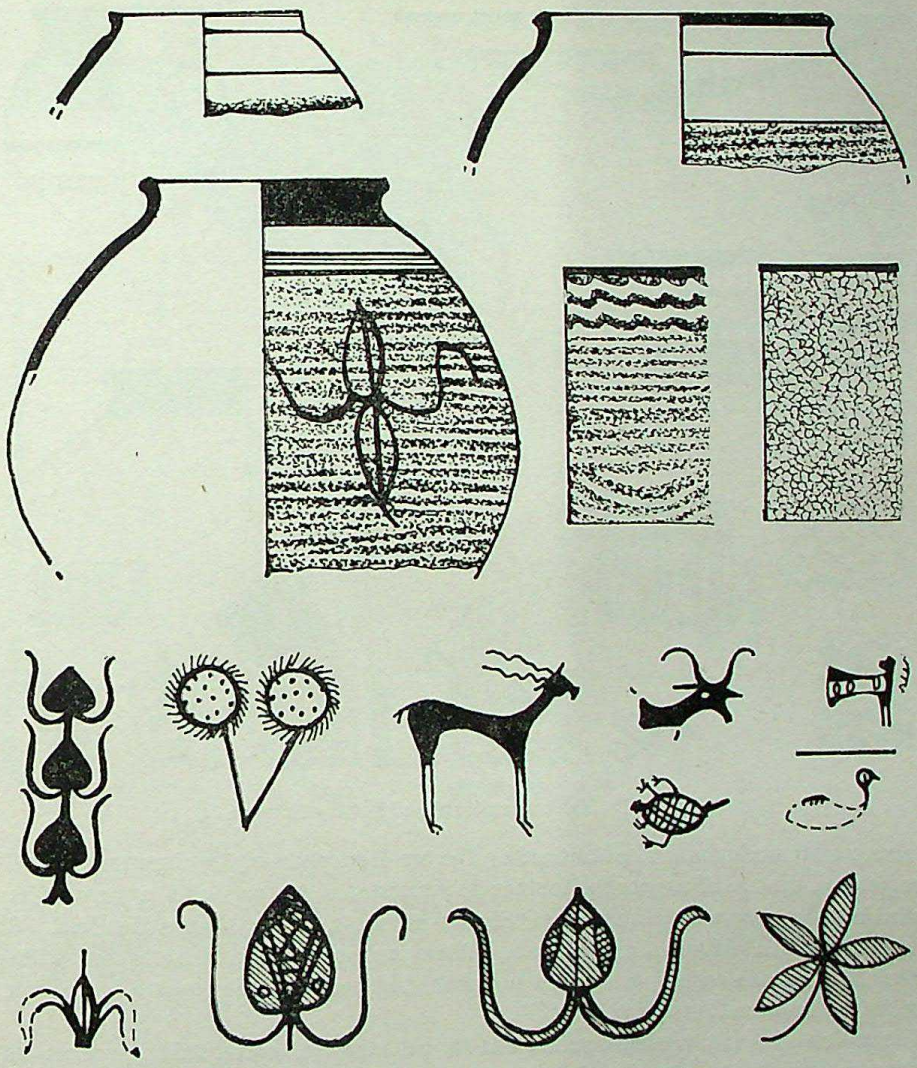

Fig. 3.30. Kalibangan I: Painted Pottery Fabric B.

sides with sharp ridged incisions of varying patterns and on the outside with single or multiple rows of cord impressions. Amri IIB has yielded parallels of these basins.

Fabric E and F were differentiated on the basis of colours, the former being reddish buff and the latter grey. Fabric E includes vases with elliptoid body, jars with or without flanged rims, basins, knobbed lids, cups-on-stand and dishes-on-stand. The painted motifs are executed in both black and white and comprised floral and faunal designs, linear and curvilinear motifs. *Fig. 3.33*

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*Fig. 3.34* Fabric F includes dishes-on-stand, globular vases, bowls and basins. Some simple linear and curvilinear motifs were drawn in black with occasional use of white grey surface.

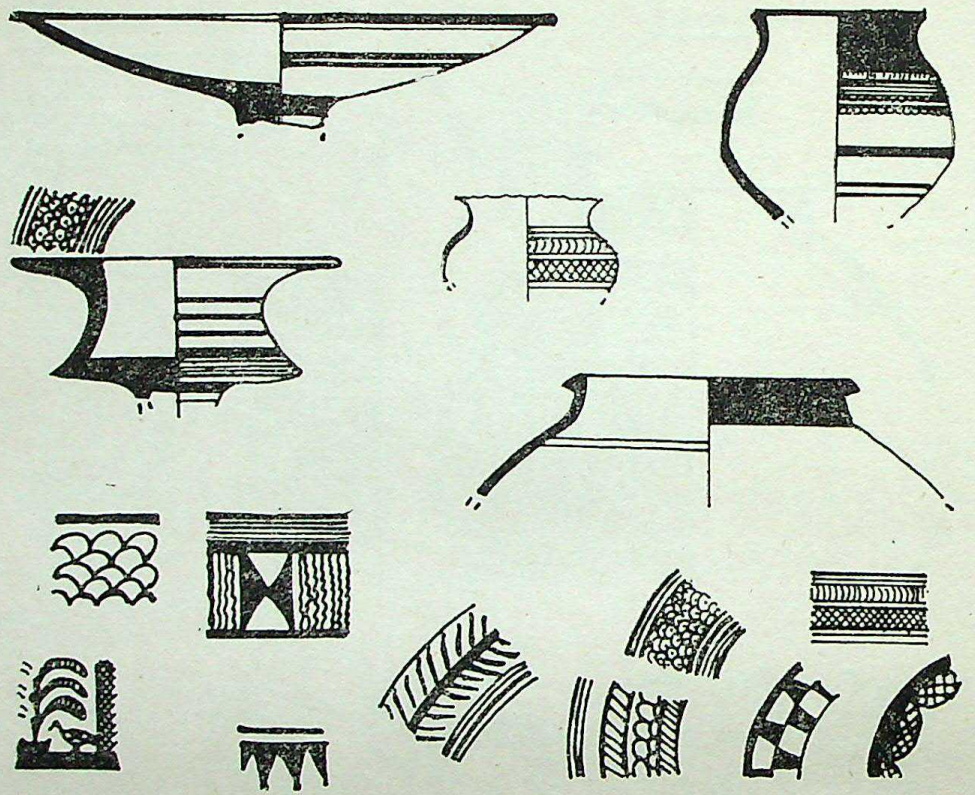

Fig. 3.31. Kalibangan I: Painted Pottery Fabric C.

Some graffiti marks have been noticed on the pre-Harappan or Sothi pottery (Lal 1979:75). Besides pottery, the use of copper for tools is duly attested. An axe and a *parasu* have been **Pl. 24** published but there are a large number of copper artefacts, more than a hundred. Some of them have parallels at Mitathal and Khurdi. These tool-types, significantly are still used in Rajasthan. Bangles in copper, terracotta and shell, and beads made of agate, carnelian, shell, copper, have also been found (Lal 1979:70).

The settlement was probably deserted due to catastrophe, earthquake, perhaps as layers indicate and the site was abandoned temporarily. After that the Harappans occupied this site. However, the pre-Harappan pottery exists along with the Harappan pottery in later phase. This shows that perhaps the pre-Harappans came back to the site after the situation became normal.

**Period II (Harappan)**

During this phase the settlement pattern was changed to the metropolitan style containing two sectors: 'citadel' to the west for the elite and priestly class and the lower town to the east for the commoners perhaps. The citadel was built upon pre-Harappan occupational ground

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while the lower city was at least partly on an unbroken ground. The Harappans altered the pre-Harappan fortification. The citadel has two equal parts fortified in the form of two rhombs

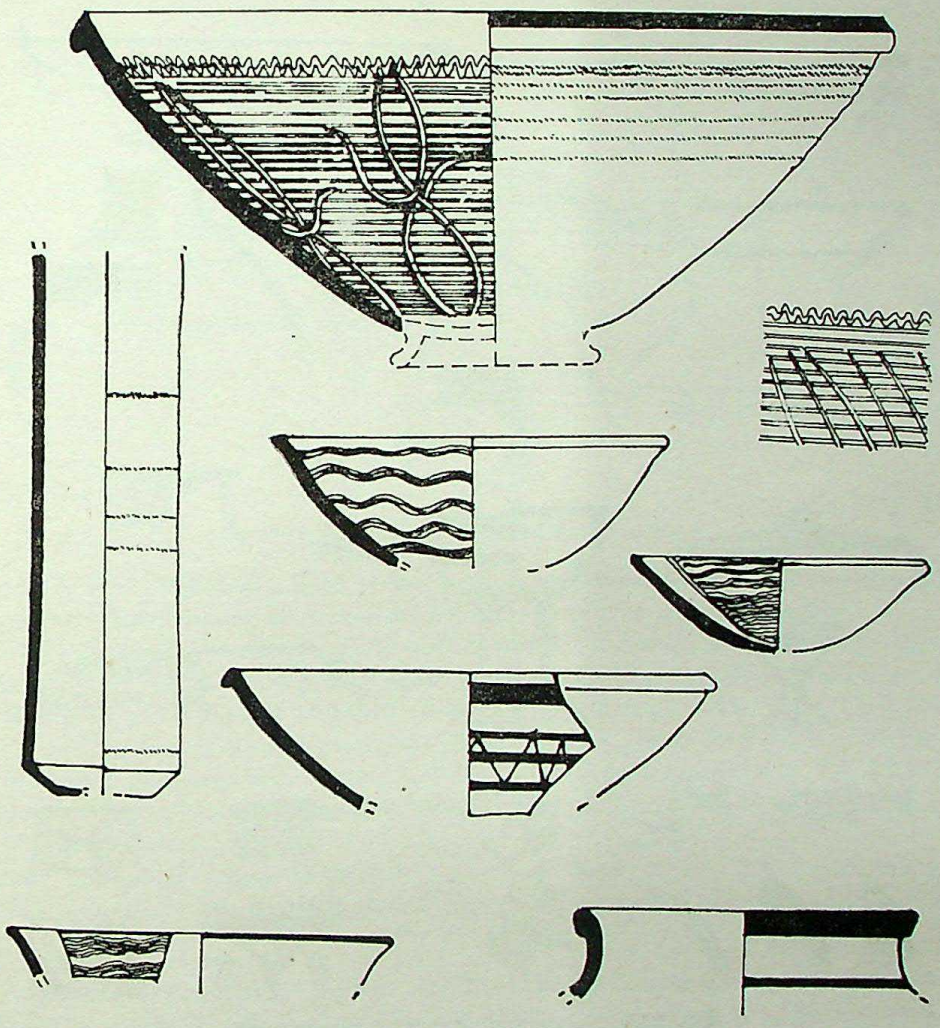

Fig. 3.32. Kalibangan I: Painted Pottery Fabric D.

with a wall in between. It has five to six massive platforms, probably used for religious purposes as attested by the occurrence of fire alters and wells. The lower city was also fortified showing roughly the grid pattern. The houses were made of mud-bricks. Burnt bricks were rarely used, only in special structures. Their maximum use was limited to wells, drains, bathing pavements.

Of the finds obtained from this period are the typical Harappan pottery, terracotta objects, toy-cart frames and wheels, rattles, birds, animals, gamesmen, etc. All of them are the typical Harappan traits. A few objects need special attention—a cylindrical seal, a terracotta cake

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with incised horned human figure on one side and a human figure pulling on an obscure object, a human head, a bull in very vigorous changing mood. The mother goddess figurines are

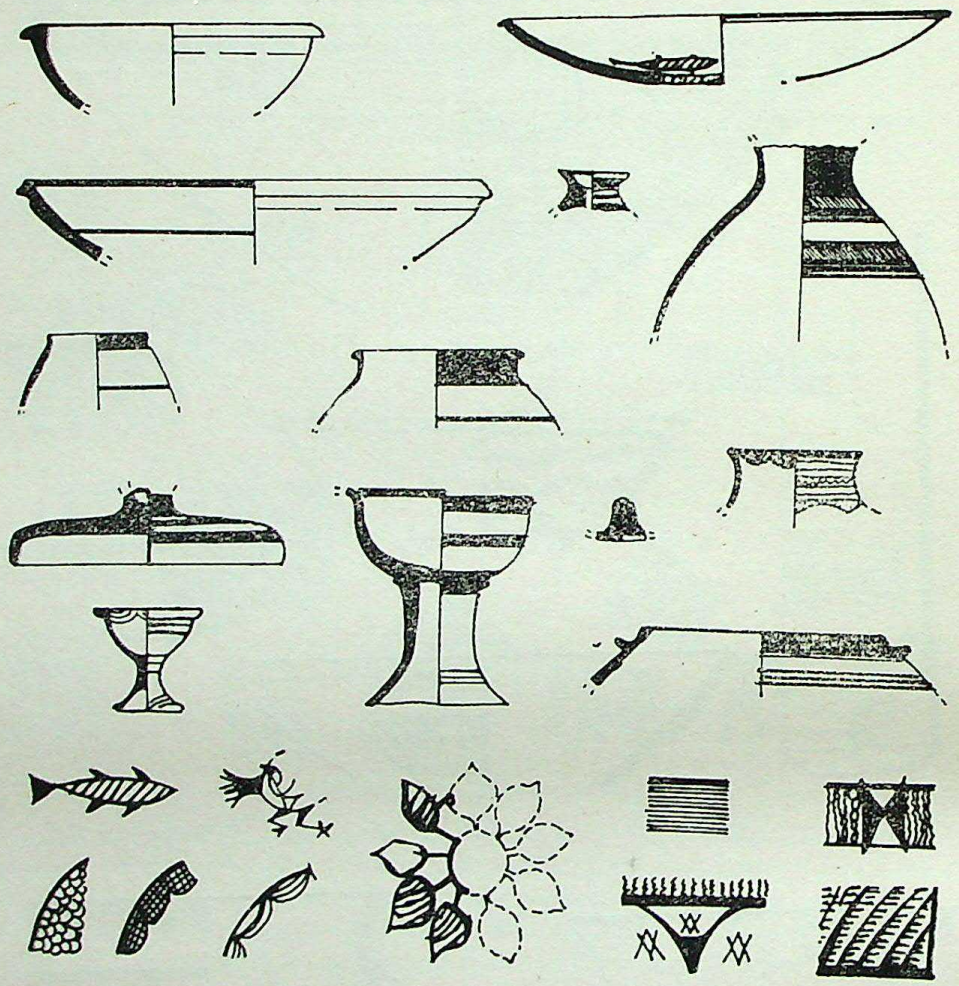

Fig. 3.33. Kalibangan I: Painted Pottery Fabric E.

completely absent here. Wheat and barley were found in the excavations. Ornaments included beads, bangles of various materials, ivory combs and copper mirrors and pins.

Three types of burial practices were attested : 1. Extended inhumation—grave pits, 2. Pot burials, and 3. Grave pits containing pottery and other objects only.

**Sothi**

The site of Sothi is located in the Bikaner deserts on the Ghaggar or Saraswati flowing through Sri Ganganagar District of Rajasthan. The site was explored and excavated by

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A. Ghosh in 1951 (Ghosh 1952; 1965) and later on was revisited by K.F. Dalal (1980: 33-34) and K.N. Dikshit (1979: 105-106; 1980: 32-34; 1984: 531-537). Six trenches were laid by Ghosh, designated as STH A to STH F. The maximum thickness of the occupational deposit is about 2.50 m divided in ten layers in Trench STH D. The pottery was concentrated upto layer 6.

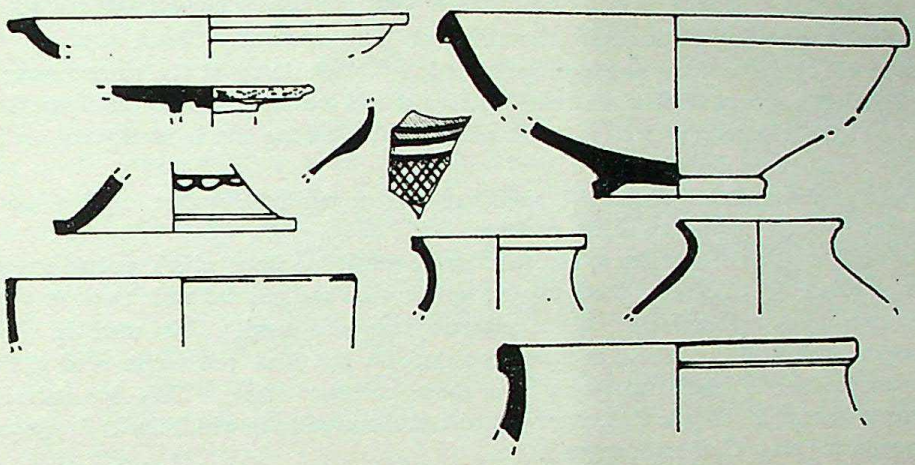

Fig. 3.34. Kalibangan I: Painted Pottery Fabric F.

The layers 8, 9, 10 yielded only three potsherds along with one bone piece. These three layers are completely devoid of any other habitational sign except some charcoal specks.

In 1978 Dikshit laid a trial trench on western side of the mound. The trench was excavated upto the depth of 3.40 m. A deposit of loose earth from surface to 0.50 m contained mixed wares Harappan and Sothi and from 0.50 to 0.70 m it was only Sothi Ware. The pottery repertoir included mainly Kalibangan Fabrics C and D. Jars, bowls and basins were numerically the largest. Bichrome Ware (Fabric A) is found in a limited quantity only. The Sothi ware is characterized by pale and red colour with black paintings laid on a whitish band which served as the secondary base.

Other antiquities belong to Mature Harappan phase. These are terracotta cakes, triangular and round balls pierced in the middle with four divisions, cart frames and bangles.

**Siswal**

The site of Siswal is situated on the left bank of the Chautang river in Haryana, 26 km west of Hissar (Suraj Bhan 1971-72: 44-46; 1975: 103-9; 1976: 23-30). It is a fairly large mound, 12.5 m high and covering approximately an area of 300 by 200 m. Excavations were carried out by the Kurukshetra University under the direction of Suraj Bhan; unfortunately on a very limited scale. A trial trench, measuring 2 sq m was laid in the western part of the mound and was dug to a maximum depth of 1.9 m. It yielded 1.25 m thick deposit. However, no architectural remains were encountered. On the basis of the ceramic assemblage, the following cultural sequence has been worked out:

Siswal B—contemporary to Mature Harappan phase
Siswal A—contemporary to pre-Harappan Kalibangan I

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**Siswal A**

Siswal A has yielded handmade and wheel-turned pottery, both covering all the characteristic fabrics of Kalibangan I Culture, from A to F—bichrome (white and black) paintings, internally incised and externally rusticated vessels. A few sherds of coarse red ware and a single sherd of black-and-red ware were also reported. The main shapes included *lota* shaped vases, carinated or globular vases, oval shaped jars, bowls with convex, out-turned or flat-topped rims, troughs incised on the interior, dish or bowl-on-stand, stemed cups or goblets. Painted motifs comprise linear and geometric designs—black band at the rim or neck; loops, hatched triangles, groups of oblique strokes, rectangles and lozenges, and flowing lines. Troughs are incised with horizontal or groups of flowing grooves on the interior and vases are incised with chevron and cord designs.

Broadly, the ceramic assemblage is similar to Kalibangan I, However, regional variations are noticed in a few shapes and design patterns.

Fabric A consists of medium to coarse red ware turned on slow wheel, potted irregularly, thin to medium in thickness, fired to grey or red core and painted with black or chocolate designs over matt red surfaces. White pigment was also used. This ware is similar to Kalibangan I Fabric A. Fabric B of Siswal is a medium to thick red ware and well fired. The lower surface is rusticated, sometimes showing finger marks. This is equivalent to Kalibangan Fabric B. Fabric C is better potted and shows red slip with black designs. This corresponds to Fabric C of Kalibangan I.

Fabric D is a thick sturdy red, well fired pottery, comparable to Fabric D of Kalibangan I. Pots of Fabrics E and F are rarely noticed at Siswal. Here it is significant to note that floral and faunal motifs did not occur on Siswal pottery.

Although there is no radiocarbon date for Siswal A, yet on the basis of its cultural affinities it can be bracketed with Kalibangan I.

**Siswal B**

Siswal B deposit is found to be stratigraphically overlying the Siswal A occupation and is connected with a few mature Harappan potsherds and antiquities. The excavator feels that Siswal B was a village site predominently inhabited by the Siswal folk during the Harappan period.

All the Siswal A wares continued in Siswal B phase but Black-and-red Ware is totally absent in this phase. The pottery assemblage includes '*S*' shaped jars, collared vessels, simple and carinated bowls. Painted motifs are confined mainly to large black or brown horizontal bands around the upper portion of the vessels and the white pigment disappeared. The mature Harappan pottery of plain red ware in usual bright red slip and black horizontal bands has been reported though in a limited number. The Harappan jars, dishes-on-stand and some perforated jars also form part of the ceramic assemblage.

The excavation has not yielded any other notable object. However, the surface collection shows that these people knew the use of milling stones, terracotta bangles, biconical beads, triangular cakes, discs and a crucible with attached copper oxide.

The cultural assemblage witnesses that the pre-Harappan and Harappans lived here together, for sometime, atleast.

**Lothal**

The site of Lothal lies 80 kms south-west of Ahmedabad, between the Bhogao and

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Sabarmati rivers. It is a low lying mound and rises to a height of 3.5 m from the surrounding flat and featureless plains. The site was discovered in 1954 by S.R. Rao (1973) and was excavated during the following seven years. Excavations have brought to light five phases of continuous occupation, of which the first four, labelled 'Lothal A', are Harappan and the fifth, 'Lothal B', is Late Harappan.

Lothal A in some respect is relevant here. Lothal A has yielded all the characteristics of Harappan Culture plus two ceramics more—the Micaceous Red Ware and the Black-and-red Ware. Both are painted. The Micaceous is marked by round bottomed jars and bowls, convex sided bowl with stud handle. However, it is significant to note that no separate pre-Harappan horizon exists at the site though the utter scarcity of Harappan pottery and exuberance of the Micaceous Red Ware in three metre thick debris below the present water level indicates a pre-Harappan occupation. According to Rao, "Before the advent of the Harappans, Lothal was a small village standing on a low tell of the left bank of the river. The main occupation of the Micaceous Red Ware using people, who inhabited the villages, were stock-raising, fishing and agriculture. . . . Bead making, shell fishing, ivory making and cotton spinning must have been important local industries which attracted the Harappan traders from the Indus Valley to Lothal".

The tool kit of these original inhabitants included short chalcedony blades. No other agricultural implement has been traced out at Lothal. No information could be gathered regarding their dwellings.

**Shahr-i Sokhta**

The prehistoric mound of Shahr-i Sokhta lies in the centre of Iranian Siestan. This is one of the most prominent settlements of the third millennium on the Iranian plateau. It extends over an area of 138.4 hectares and its systematic excavations, conducted during the last one decade, have brought to light a sequence of cultures which goes back to 3200 B.C. and comes down to 1800 B.C. During 1400 years of its existence it passed through four major cultural periods, which are further sub-divided in eleven levels:

| | | | |
|---|---|---|---|
| 2100—1800 B.C. | Period IV | Level | 2 to 0 |
| 2500—2100 B.C. | Period III | Level | 4 to 3 |
| 2700—2500 B.C. | Period II | Level | 7 to 5 |
| 3200—2700 B.C. | Period I | Level | 10 to 8 |

The excavations at this site by ISMEO under the direction of M. Tosi started in 1967 and ended in 1977 (Tosi 1968, 1969; Biscione, *et al* 1977). The excavations reveal that the site had no ziggurat, no acropolis, no enclosure walls or monumental gateways, no public building or such structure which may be connected with a specific function. The sprawling site had been an open settlement in the following areas:

1. *Eastern Residential Area*

This includes the whole eastern side of the settlement with the more elevated areas, including the zone of the burnt building. The area is about 16 hectares. It is dated to Period I (3200-2700 B.C.).

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2. *Central Quarters*

This includes the vast inner area which is bounded on the eastern, western and southern sides by the three largest depressions contained in the plateau. Here, in the second half of the third millennium B.C., there stood large building complexes with particular characteristics which distinguish them clearly from the standard type of the Eastern Residential Area and from the architecture known in Period II. The earliest remains here go back to 2700 B.C. (Period II; Phase 7). The total area is 20 hectares.

3. *North-Western Area*

This includes all the hillocks, and the level stretches along the nothern and western sides. A large lapis lazuli workshop has been located here.

**Period I (3200-2700 B.C.) Phases 10-8**

The cultural assemblage of Period I of Shahr-i Sokhta (phase 10-8) combines in it Namazga III type South Turkmenian painted motifs on pottery, which are closely comparable with the Quetta Ware designs, which in turn are comparable with painted motifs which have now been found at Mehargarh in an earlier context. This pottery connects this period with Mundigak III where also this ware has been found. Together with this pottery, other wares, similar to Kechi Beg pottery of Baluchistan, have also been reported. A proto-Elamite tablet of Susa type and twenty seal impressions of proto-Elamite seals, and painted globular jars with small lugs have been recovered from Level 10. A radiocarbon date of this level is (TUNC-61) 3222±95 B.C.

In its cultural and economic interaction with the neighbouring regions, there is, therefore, the evidence in favour of south Turkmenia, Badakshan, northern and central Baluchistan, Southern Iran, Elam and possibly, Mesopotamia. Surprisingly enough, so far no specific evidence of its contacts with the Harappan Culture has come to light. It appears from the various kinds of evidence that during this period people from South Turkmenian sites like Kara Depe, south Afghanistani sites like Mundigak and Baluchistan sites like Damb Sadaat, Mehargarh moved in and colonized the delta of the Helmand river since about 40 per cent of the total material, including painted pottery, appears to belong to Namazga III-Geoksyur, Mundigak III, Mehargarh VI and Damb Sadaat II complexes. The Central Asian pottery (mainly in phases 10 and 9) accounts for 11.45 per cent; Baluchistan pottery with chequer board patterns 3.97 per cent; and Kechi Beg and Quetta motifs 13.54 per cent (mainly in phases 8 and 9).

As far as the structural remains are concerned, we have the evidence of only single roomed houses with flat roof, and stretches of walls of mud-bricks measuring 40×20×10 cm. The doors were rectangular with an average height of 150 cm.

**Period II (2700-2500 B.C.) Phases 7-5**

This period perhaps witnessed the real prosperity in the town. By now different traditions of pd. I had consolidated. It corresponds roughly to Early dynastic II and III of Mesopotamia. It is also related to Namazga III late levels and Kot Diji-Sothi complex of the Early Indus. There is clear evidence of the existence of full time artisans, of the concentration of certain industrial activities. It is marked by the abundance of raw materials imported from regions lying outside the local exchange circuit, like lapis lazuli, turquoise and sea shells. With thousands of lapis waste, workshop has been traced in the north-Western area. In the later

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period the use of lapis and turquoise became scarcer. In the houses of the last level (5) of this period craftmanship on minor scale is evident by the findings of flakes left over from manufacturing of carnelian, chlorite and alabaster, together with fragments of chlorite stamp seals and shells broken during processing. In one of the houses, bifacial flint arrowheads were manufactured.

It may be noted that a large portion of the Eastern residential area was destroyed by fire, marking the end of phase 7.

In Eastern Residential area the remains of several houses have been unearthed. They were bigger in size than those belonging to Period I. They are square in plan and are grouped by four to form blocks, which are bounded by a network of winding streets with an average width of 2 m. Each housing unit measures from 90 sq m to 150 sq m. Each unit consists of a single storyed building divided into a variable number of square rooms (from 6 to 10) and built entirely with moulded bricks of $40 \times 23 \times 10$ cm size.

It had a big courtyard also. Terracotta pipes were found to remove sullage water from the houses.

Like the pottery of Period I, the pottery of this period is also mostly buff with dark brown decorations, with only 5 per cent of black-on-grey ware. In this period the discovery of lapis workshop indicates the existence of a long range trade in the form of considerable quantities of lapis lazuli and probably their onward supply to Mesopotamian cities.

Barley and wheat were the main grains grown for stapple food.

This period occupies an area of 45 hectares.

**Period III** (2500-2100 B.C.) Phases 4 and 3.

This period revealed the characteristics of Period I-II. During this period, the Eastern Residential Area was gradually abandoned. The main habitation had now shifted to the west. The monumental structure of Period IV was laid in an abandoned zone on the southern end of the Eastern Residential Area of this period. The city was on verge of becoming truly urbanised. It now occupied an area of 80 hectares.

The shapes and decorative motifs on the pottery are highly standardized, the decorative motifs become fewer and are often much simplified. The pottery was turned on fast wheel.

**Period IV** (2000-1800 B.C.) Phases 2-1, 0.

It marks the sudden decline of the site. The residential area now decreased in size from 80 hectares to 5 hectares and got concentrated in the south-east and north-west ends of the central plateau—all the other areas were abandoned. The so-called Burnt Building belongs to this period. Tosi believes that the burning was an act of armed raid and vandalism while Gupta feels that it may have been only accidental.

Fragments of the pottery typical of this period are concentrated in two or three localities on the surface. The pots and pans are wheel-turned with receeding profiles and carinations. The painted decoration is very rare and burnishing is widely used. A type of pottery with red slip on a brick red paste becomes fairly common. There is some evidence of contact with the Bampur Valley and the southern shore of the Persian Gulf.

At the end of Period IV life ceases at Shahr-i Sokhta and in the surrounding villages. The Helmand delta shifts towards the NE and therefore, that part ot Siestan which was previously inhabited now becomes a desert.

The foregoing summary of excavated remains at Shahr-i Sokhta may clearly show that

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the site had close contacts with the pre-Harappan Nal and Bampur cultures of Baluchistan whose typical potteries have been found at Sokhta but it was still, like Yahya, an Iranian site with closer contacts with western Iranian and Mesopotamian sites.

**Bampur**

Sir Aurel Stein (1937) was the first who explored the Bampur Valley of Persian Baluchistan and plotted a dozen prehistoric sites on the map in the year 1932. A few important ones are Chah Husaini, Qala-i-Sardagah, Khurab and Damin (Lamberg-Karlovsky & Schmandt Besserat : cyclostyled copy). He laid trial trenches on the Bampur mound and unearthed characteristic pottery assemblages. While describing them, he noted strong resemblances between the pottery of Bampur Valley and Kulli Ware of Makran.

The site of Bampur was again excavated by Beatric deCardi (1970:241-253) in 1966. She located six successive periods of occupation in two deep cuttings, sites Z and Y.

Though deCardi has divided the whole Bampur sequence in six periods, she (deCardi 1968:38) herself admits that there are basically two cultural groups: Bampur I-IV and Bampur V-VI. Group 1 is considered as indigenous cultural development, while Group 2 represents the culture of local and alien elements; incidentally Period VI had developed out of Period V.

No radiocarbon dates are available but on the basis of relative dating the whole sequence may safely be placed in the time bracket of 2400 B.C.—1800 B.C. (Tosi 1970:18).

**Period I**

Period I is devoid of structural remains. It is a horizon containing only debris with a few potsherds, fragmentary animal bones and ash.

**Period II**

Period II represents a short duration of time. The earliest structural remains are reported from this level. Two mud-brick buildings, separated by a narrow passage, were encountered. Walls had been coated with mud-plaster. Bricks measuring 20 cm × 10 cm were laid into regular courses. A floor of hard sand (15 cm thick) was also noticed. Cream-slipped wheel-turned red and grey wares had been found in this period.

**Period III**

Period III is further divided into four phases of occupation. The period demonstrates the age of rebuilding on Site Z. Pottery, reported from this period, established its relationship with the regions to the north: Siestan, and Mundigak (IV-1) in southern Afghanistan.

**Period IV**

This period is marked on Site Z and is divided into three phases: initial phase of re-development and two structural phases. Pottery still reflects the link with the north-eastern region. At the end of this period some alien people seem to have arrived as has been demonstrated by their wares.

**Period V**

Break in the stratigraphical and cultural sequence in Period V clearly indicates the arrival of new people responsible for introducing a new culture at the site. The cream-slipped ware of Bampur I-IV was replaced by buff and red slipped wares. The technique of streak burnishing

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and incising the pottery was introduced. A few pottery motifs of phase 1 are very much similar to the Qal'ah and the Shuga cultures of Fars in southern Iran. In phase 2 the pottery resembles the Kulli Ware.

**Period VI**

Period VI represents the final phase of prehistoric occupation at the site. Due to as many as eight graves cutting down deep from the surface itself all the levels had been much disturbed. It was marked by a local ceramic industry derived from Period V. Incised grey wares and Black-on-grey Ware with distinctive animal pattern provide close similarity with the pottery of cairn burials of the Umm-an-Nar culture of the Oman Peninsula.

*Pottery*

The pottery of Bampur culture reflects a local style which continued from Period I to IV. However, each period effected some changes in the shapes and decorations of the ceramics. The pottery of Bampur I-IV was wheel-turned. It was distinguished by red and grey wares bearing some decoration: paintings or comb incising.

A large number of pottery types are reported throughout: jars, bowls, goblets, cups, dishes-on-stand, deep basins, large storage jars, etc. However, each period has slightly varied form of the above mentioned pots. Although, the geometric designs were very common throughout, the floral patterns were limited to the palm fronds (DeCardi 1970: Fig. 17.12). Animal motifs include long horned animals, birds, cervids, snakes, horn friezes, etc. Mundigak and Deh Morasi Ghundai (southern Afghanistan) provide comparable material for Bampur I-IV culture. The first signs of contact with Siestan appeared in Bampur III and persisted into Bampur IV. A few painted motifs (DeCardi 1970: 284) with a few small finds like a pottery mousetrap and a compartmented bronze stamp-seal also relate Bampur III-IV to Mundigak $IV_1$.

By Period V the Bampur Culture declined and a new culture was introduced by the aliens. The identity of these aliens could not be determined due to the paucity of comparable material. The pottery of these new comers was inferior in quality. Handmade and wheel-turned ware of inferior quality were found in Period VI-1. For handmade pottery two types are there: orange red ware with large grits and a coarse, grog-backed pink ware. The wheel-turned pottery ranges from reddish buff to orange red. Grey ware is also popular. Designs were executed in black or dark brown paint. The most common pot-shapes were bowls of various types, basins, jars, tall cylindrical goblets, cups, etc.

Various types of geometric, animal and floral motifs were executed to decorate the pottery.

DeCardi (1970:303) has traced several Bampur V-1 designs on the pottery of Shahi-tump. She also linked Bampur V-1 wares to Jhukar Culture.

The wares of Bampur V-2 reflects Kulli-Mehi traits. Besides the resemblance in the painted motifs, a few pottery shapes are also identical in these two cultures. Both the hand-made and wheel-turned pottery occurred. Red, buff and grey wares were extensively used. A few new types like small shallow saucers, jars with a serviceable necks and perforated pots were introduced in phase 2. Phase 2 designs fall into three groups: geometric, naturalistic and zoomorphic. The motifs of fish, *pipal* leaves, trees with dropping sides, ponds with caprids are used to establish the link between the Bampur and Kulli-Harappan cultures. However, on the basis of Bampur V-2 pottery the site can be put safely in Kulli interaction zone (DeCardi 1970:305-310).

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During Period VI, the ceramic industry evolved out of Period V ceramic industry. However, in this period the Kulli-Mehi traits are rarely found. The pottery was superior than the pottery of Period V, both in fabric and forms.

The red ware and the grey ware both were popular. The major pottery shapes included jars, globular pots, storage jars, flasks, basins and bowls with various shapes.

Plain ridges ware, streak burnished wares and incised grey ware have been discovered in large numbers. Ceramic motifs and animal motifs (caprid and humped cattle) were still painted on pots.

A few examples of the black-on-grey ware are also noticed in Period VI. One narrow-necked canister and its caprids had their parallels at Umm-an-Nar. Pottery of this period connects Bampur with Oman.

*Stone Vases and Incised Grey Ware Pots*

The fragments of carved vases have been discovered at Bampur: one from Period IV-2 and two from surface (During Caspers in DeCardi 1970:319-320). Fragments of incised grey ware pots similar to carved vases in shapes and designs were recovered from Bampur Period IV-VI.

The other small finds include abstract headless figurines, an animal figurine, two sickle shaped pendants, clay sling pellets, two potsherds comprising parts of a clay 'mousetrap', a few scraps of bronze, including part of a small ring with scalloped edge and a badly corroded knife-tang and a compartmented bronze seal (IV-2-3) (DeCardi 1970:326-329).

A number of flint arrowheads in Period IV, a stone knife blade and a scraper in Period III, two stone axes, a part of saddle quern and a pounder, fragments of alabaster vessels are a few noteworthy findings.

This quick survey of the Bampur material presents three important observations: Bampur I to IV is a single culture with its own developmental stages, Period V-VI marked the arrival of a new people, inferior in technology to that of local inhabitants; the site was maintaining contacts with Siestan and south-eastern Afghanistan during Period III and with Qal'ah and the Shuga Culture of Fars, in Period V-1 and with Kulli-Harappan in Period V-2 and with Oman Peninsula in Period VI.

**Tepe Yahya**

The site of Tepe Yahya lies in the Soghun Valley, approximately 325 km south of Kerman and 30 km north-east of the present town of Doltabad. The mound rises 19.8 m above the present plateau. It measures 187 m in diameter.

The excavations at the site were conducted from 1969 to 1976 by an American Expedition of Peabody Museum, Harvard University under the direction of C.C. Lamberg-Karlovsky (1970, 1972, 1973b, 1976a, 1976b). Excavations have revealed a settlement of fourth-third millennium B.C. although it started in the fifth millennium B.C. as a neolithic village. It has helped in the reconstruction of a cultural sequence of long duration in southern Iran. On the basis of excavated remains the following sequence could be built.

| | |
|---|---|
| Period I | Late occupation |
| Period II | |
| Period III | |
| Period IV A | 2200—1800 B.C. |
| Period IV B | 3000—2500 B.C. |

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| | |
|---|---|
| Period IV C | 3400—3000 B.C. |
| Period V A to C | 3800—3400 B.C. |
| Period VI | 4500—3800 B.C. |

Here we are concerned with periods IV A to VI only as they alone belong to the prehistoric times.

**Period VI**

The site was first inhabited around 4500 B.C., date based on uncorrected radiocarbon and relative dates. At this time Yahya had a fully developed Late Neolithic community whose subsistence was based on domesticated sheep, goat, and cattle and the cultivation of cereals and legumes. Mud-bricks were used for making structures. The structures appear to be a series of small storage rooms, approximately 1.5 metres square. The discovery of twenty of these rooms, a few with doorways, has been very significant. Fragments of reed matting and timber found in the poorly preserved floors provide traces of the fallen roofs.

The lithic industry of this period is comprised of flint and bone tools. Hafted bone implements as well as flint sickle blades were recovered. A very limited number of obsidian fragments, only three, were found from this period.

The pottery is marked by a coarse, handmade, chaff tempered ware having bowls and large jars. Sometimes this coarse pottery has a red wash or is decorated by large bands of meandering lines. There is an increase (throughout this period) of fine burnishing over a red or brown slipped finer chaff tempered vase. In the uppermost levels, the bichrome pottery, found in limited scale, has been found in the shape of small bowls and is characterized by a fine buff with painted geometric motifs placed directly beneath the rim in black and red paint.

Two pieces of metal have also been found in this period along with a small pin fragment.

The most interesting finds of this period is a unique steatite female figurine which was resting on top of a cache of flint tools, decoratively carved bone, and three arrow straightners. The local resources of chlorite was utilized to produce bowls as well as beads. There is very little evidence of specialized craft production in Period VI. There are only twelve sites of this period in the Doltabad region.

**Period V**

It is divided into three phases of which C-A indicates direct continuity from Period VI. There are, however, quantitative changes through the three architectural levels of Period V. The lowermost phase of Period V—period VC—consists of over 15 per cent coarse chaff-tempered ware with the remaining 5 per cent consisting of a finer brown to red burnished ware, plain in buff, and a black-on-buff ware. Period VB has over 50 per cent black-on-buff pots with design elements and shapes readily paralleled at Bakun and Susa A. The last phase of Period V, VA, witnesses a decrease in coarse chaff-tempered ware to less than 20 per cent, a continuation of black-on-buff but the plurality of ceramics being a distinctive black-on-red ware. This black-on-red is paralled at sites in Iranian Baluchistan.

The first presence of bevelled rim bowls in Period VA as well as black-on-grey painted wares and painted brown black on fine orange wares are the characteristics of IVC.

Subsistence pattern is indicated by an increasing amount of sheep and goat over cattle and of legumes and barely over wheat. Metallurgy first appears in the form of copper arsenic alloyed chisels, awls, and pins and is accompained by an increase in the use of mineral resources

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in the form of obsidian, carnelian, alabaster, mother of pearls, turquoise, chlorite and, by the last phase of Period V, a single lapis lazuli bead. Besides the obsidian and metal, other material used for ornaments mainly is steatite-chlorite, used for statuary; beads, bowls and pestles.

In Period VA and VB we have a number of metal pins, chisels, blades and bracelet fragments as well as two smelted 'ingots' of copper. The architecture appears to be entirely domestic. Individual house units cannot be isolated with rooms having hearths, chimneys and storage vessels, articulating with smaller rooms of varying sizes, forming a simple house complex.

Here it is worth mentioning that there are approximately 25 bichrome red/yellow, black/brown potsherds with geometric designs in Period VA which had distant parallels in the bichrome wares of Namazga Tepe.

There are 73 sites of this period in the Doltabad area.

**Period IV C**

The beginning of Period IVC is marked by a break in the occupation of Yahya. Yahya IVC is entirely different from all that preceded it. Period IVC has a single building complex which contains a remarkable association of cultural materials. Two hundred square metres of the IVC architectural complex with seven rooms has yielded the Proto-Elamite tablets and cylinder sealings. An interesting baked clay-water-channel extends through the wall of one of the rooms. The nature of this building can be decided by the findings on the floors:

1. Storage : small rooms with large storage jars ;
2. Record keeping : both blank and written account tablets ;
3. Receiving and shipping of goods, cylinder seal impressions on jar stoppers of one style and actual seals of another style. The Proto-Elamite tablets and Mesopotamian type (Jemdet Nasr) seals and sealings have been found together on the same floors.

The situation on the northern side is clearly different from the south step trench. Here the poorly preserved walls of domestic architecture with similar ceramic assemblage of IVC southern complex have been found. However, it has not yielded any seal, sealing or Proto-Elamite tablet. This difference shows the difference in activities—an administrative building as opposed to domestic quarters.

Several of the pottery types, diagnostic of Period VA continued in Period IVC, mostly in domestic area, while new wares are dominant in the administrative building and rare in domestic area—Jemdet Nasr polychrome jars, club rim bowls, solid footed chalices, snakes in relief and burnished grey ware, bevelled rim bowls.

The ceramics of this phase have parallels in Late Uruk, Jemdet Nasr, Shahr-i Sokhta, Bampur I-IV and Hafit (Oman).

The presence of seals, sealings and Proto-Elamite tablets as well as associated Jemdet Nasr ceramics all converge toward a late fourth and very early third millennium B.C. date for Yahya IVC.

A single sherd of Nal Ware has been found in this period. An Amri sherd has also come from the surface.

**Period IV B**

This period witnessed the prosperity and full time activities for chlorite. Two major phases

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of this period—lower with a single architectural complex builts over the wall of Period IVC, and Upper without good architectural evidence. A single room with small storage rooms containing clay-bins was exposed in the lower area. A number of pottery types continued from Period IVC—like snakes applied in relief, burnished grey ware, black-on-grey and solid footed chalices. One cylinder seal was found resting directly on the floor of the room and three others in the fill above the floors. These seals are all of steatite and not paralleled in other areas. No cylinder sealing was recovered. The stamp seals, reminiscent of Persian Gulf types, have been recovered. Metal blades from this context have been analysed. They contain both arsenical and tin bronzes.

In the upper part of IVB the architecture is absent. The ceramics are essentially identical to those of the lower phase of Period IV with greater evidence of fine painted wares of Bampur V-VI type. No seal and sealing was found in this phase.

Chlorite abounds on both sides of the mound in the upper phase of Period IVB. Chlorite bowls and beads have been recovered in every stage of manufacturing operation. Tepe Yahya was a centre of chlorite production and export. Thousands of fragments of chlorite bowls have been found. These bowls have a wide distribution and have been found on almost every site in Mesopotamia of Early Dynastic II-III date. They are also found on contemporary sites on islands of the Persian Gulf and at Mohenjodaro. The motifs carved on these chlorite vessels are nearly identical in style and type over the wide area of distribution.

**Period IV A**

This period has seen the greatest architectural activity and probably longest continuous settlement in third millennium B.C. Three major domestic building complexes have been uncovered in the northern trench. In the middle construction phase a fine chlorite plaque and a Harappan seal impression on a potsherd has been found. Other finds are two cylinder seals, metal implements and beads of a variety of materials.

South complex has revealed a building of larger proportions. Four rooms with ceramics have been uncovered. A large number of chlorite and pottery vessels have been found. A terracotta cake type object has also been found in this period.

It may be seen from the foregoing summary of excavated remains at Tepe Yahya that although the site shared some painted wares with the Indian Baluchi sites in the pre-Harappan times and marginal trade contacts with the Indus Valley during the Harappan time, by and large, its history was tied with the history of Western Iran and Mesopotamia and not India.

## THE CERAMICS

Ceramics form one of the very early industries which the neolithic man practised and developed. These are of various varieties and types which occur sometimes due to technological differences and sometimes due to regional fashions, sometimes even due to differences in food habits and functional preferences. These flourished side by side. The texture of clay, shapes of pots and decorative motifs and designs determine the character of a ware. Sometimes they have been exported to the far off regions also. It is presumed that a group of people in a given region evolved and patronized particular ceramics or ware with its specialized shapes and decorations and the movement of one is reflected in the movement of the other ; only in exceptional cases it may not be the same. Usually these wares are known either by the sites where they

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were discovered for the first time such as the Harappan, or after the region where they are found widely distributed, such as the Quetta, or by some characteristic feature, such as the Painted Grey Ware. In either case, it becomes a cultural label. Hence our main concern.

**Kile Gul Mohammad Black-on-red Ware**

The ware is named after its first discovery at Kile Gul Mohammad (KGM II-III levels) (Fairservis 1956 : 256-257, Designs 1-32). The ware has two variants : Variant I is wheel-turned, of fine paste with smooth texture, occasionally polished. Simple geometric designs are executed in black over red slip. Sometimes pots appear to have been given first buff slip and then red wash. The decorative designs were painted at the end.

*Fig. 2.16*

Variant II is handmade and coiled (occasionally wheel-turned) showing the use of coarse paste mixed with sand, rough in texture. Here also the geometric designs are painted in black over red slip.

However, no decorative or stratigraphic difference between the two variants has so far been noticed. The pot forms (Fairservis 1956 : 256) are characterized by open bowls with curved or expanding sides, and large jars with small mouth. There is a single example of a pot with pedestal. Basically, the rim and its adjoining areas are painted with a broad single black band from which are suspended verticals, verticals with extended to horizontal lines on the body of the vessels and diagonals intersecting horizontals. A variant is composed of opposed diagonal lines drawn from the rim. Rows of diagonally hatched triangles are frequently suspended from the rim band. The decorative motifs, painted on the body below the rim, consist in horizontal sequence, rows of animals and birds, horizontal wavy lines, as well as zig-zags and triangles filled with vertical lines, lines radiating from a central point, each radius in turn terminating into a disc. Another motif shows parallel horizontal bands crossed by parallel diagonals with the upper left corner of the resulting diamond painted in black. A similar design is composed of parallel horizontal bands crossed by parallel diagonals in two directions, the triangles formed by these crossing elements are painted with short parallel horizontal strokes, indeterminate brush blobs, diagonal hatching between verticals ; crossed parallel diagonals on the body are a few other motifs found in this pattern (Fairservis 1956 : 271, Designs 1-32).

This ware is widely distributed in northern Baluchistan in neolithic and early chalcolithic phases : Mehargarh II-III (Jarrige and Lechevallier 1979 : 478-480), KGM II-III (Fairservis 1956 : 330-435), RG II (Fairservis 1956 : 302) and Sur Jangal (Fairservis 1959 : 300), Mundigak I-3 (Shaffer 1978B : Fig. 3.15) and Anjira I-II (DeCardi 1965 : Fig. 8, Nos. 8 & 15). Fairservis's 'Jangal Coarse Painted' used for the Zhob Valley ware is very much similar to the Variant II of KGM Black-on-red-slip.

**Kechi Beg Wares**

*Fig. 3.35*

Fairservis (1956 : 257-267) has classified a number of wares under the general heading the Kechi Beg Wares. Important ones are : Kechi Beg black-on-buff slip (Fairservis 1956 : Fig. 50A), Kechi Beg White-on-dark slip (Fairservis 1956 : Fig. 51) and Kechi Beg Polychrome (Fairservis 1956 : Fig. 53).

Kechi Beg black-on-buff slip has its climax in H2 period (KGM IV-DS I) of Fairservis's sequence (1956 : 256). In appearance, it is similar to Quetta Ware. It is wheel-turned and it possesses smooth texture and smooth finish. Usually, the geometric designs are executed in a delicate manner in black on a buff or yellow brown slip. Only a few sherds with rims intact have been recovered. These features indicate that small open bowls, small mouthed bowls with

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out-turned rims, and small mouthed jars were among the important types.

Painted motifs (Fairservis 1956 : 320, Designs 38-60) included simple parallel horizontal lines, sometimes with decorative designs between them, like diagonally hatched diamonds in

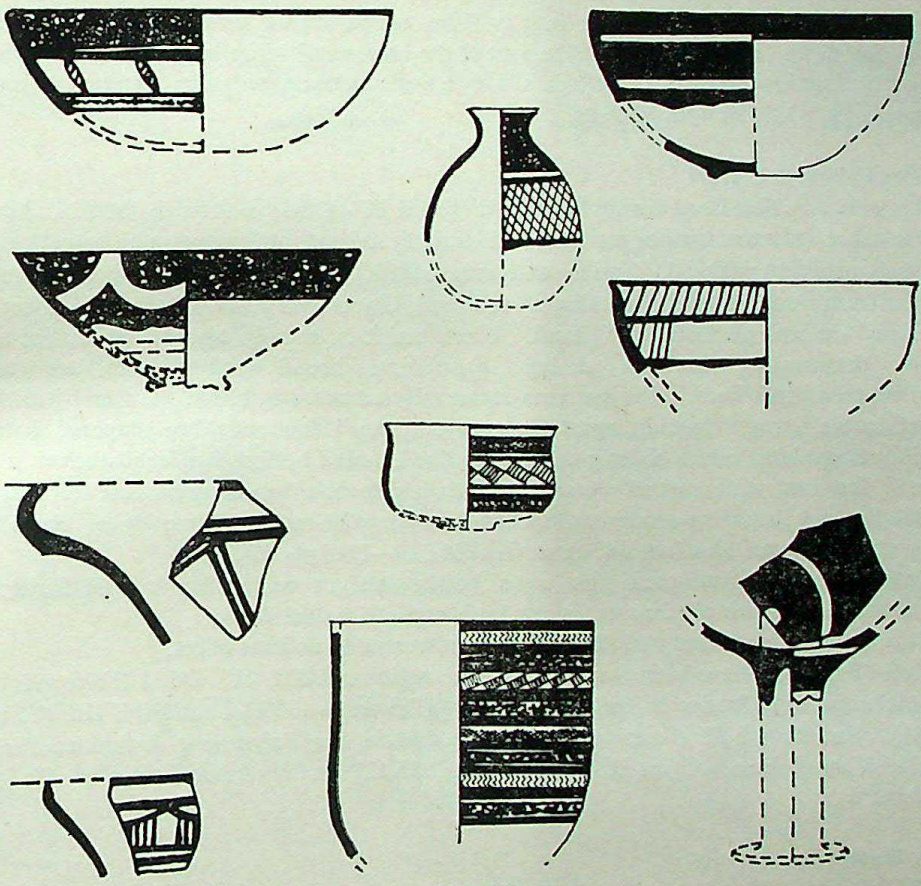

Fig. 3.35. Kechi Beg Ware.

sequence, diagonally lined diamonds, triangles, festoons joined to horizontal bands by verticals, parallel vertical zigzags between bands, diagonal dashes between bands are common in designs of single or multiple rows. All over the surface, the treatment consists of semi-circles in horizontal sequence with intervening areas cross hatched, wavy lines, etc. A single pot-sherd, decorated with humped bull, is also found.

Fairservis's 'Jangal Painted' for Zhob-Loralai is very much similar to the decorated wares of Kechi Beg, especially black-on-buff slip Kechi Beg.

**Kechi Beg White on-dark slip Ware**

This type also belongs to H2 Period (Fairservis 1956 : 257-258, Fig. 51). It has two variants marked by slip colours : a white-on-reddish slip and white-on-blackish slip. These slip colours

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are most probably due to differential firing. The pot forms include open bowls with straight or curving sides, straight walled jars with flaring rims and a single example of pedestal. Both the variants are wheel-turned and of usually smooth texture.

In Variant I the linear design consists of straight lines, loops and occasional simple combinations of horizontals and verticals with loops, usually on the interior of the vessels ; exterior decoration, known so far, occurs only in the form of paralleled horizontals. Light paint is applied directly to the red slip. In Variant II the horizontal white lines are most frequently found on the interior of bowls or platters. On high walled vessels, only the exterior is painted (Fairservis 1956 : 321, Designs 85-97).

**Kechi Beg Polychrome Ware**

This ware also flourished during H2 Period (KGM IV—DS I) (Fairservis 1956:259 Fig. 53). A very unusual decorated type of ware is wheel-turned, of smooth texture with smooth surface finish, and somewhat polished. Surface colour is reddish yellow. The basic pattern consists of parallel horizontal bands of two colours—red and black-with rows of designs in between. The designs are both geometric and floral. Black paint is usually applied at the line and as lines of demarcation between design groupings. Broad red bands are usually painted between black lines. The patterns are usually executed in black. Geometrical motifs included double zigzag diagonals, squat diagonally arranged diamonds, fine diagonal hatching, verticals between horizontals, a wavy undulating line between horizontals, bands below a wide red band festoons with central dots joined to horizontals, bands by delicate vertical lines, diagonal dashes; alternating arcs cross-hatched triangles with spaces alternately as elements of a horizontal zigzag are also found (Fairservis 1956:320—Designs 66-84).

The main pottery types are simple open bowls, straight walled bowls with flaring rims, small mouthed jars with pinched necks and large straight walled vases.

Thin walls with fine decorations produced an unusually delicate effect.

Kechi Beg wares have been found in Quetta regions; KGM IV, DS I (Fairservis 1956: 330), Mehargarh IV (Jarrige 1979:491), Kechi Beg (Fairservis 1956:330) and RG IIIa (Fairservis 1959:385), Sur Jangal II (Fairservis 1959:385). *Kechi Beg Polychrome designs are similar to Amri-Nal Ware designs.* Anjira III-IV (DeCardi 1965:127) pottery bears similarity with Kechi Beg wares.

**Togau Ware**

This ware was identified by DeCardi (1965:128-134) during her first survey on a large mound, nearly one km east of village Togau in Chhappar District and about 20 km north-west of Kalat town. It is a very fine hard ware containing no visible grits, usually well-fired and giving a ranging tone. The slip is good and does not flake off. It is fired to a full red colour somewhat orangish. In the later stages it is often fired black under reducing conditions.

*Fig. 3.36*

The forms are extremely limited. The most common shape is an open bowl, almost flat at the base, its wall curving steadily more steeply upwards. All specimens had a slight foot-ring. The bowls of stages B & C are markedly more globular that the earlier ones. The decoration is largely confined to the interior of the bowl except in the case of some bowls belonging to stage B where the external hatching, and very occasionally either single or triple horizontal lines, occur. Bowls of stage B are deep with foot-ring on a hemispherical base, rising thence into a cylindrical or straight insloping body. These bowls are decorated externally and never bore the familiar Togau frieze of horns.

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The other forms included sharply carinated bowls with open body and insloping, slightly concave neck (rim missing), and small globular jar with short neck and small foot-ring. These are decorated with a black band over the edge of the rim and usually a simple pattern around the shoulder.

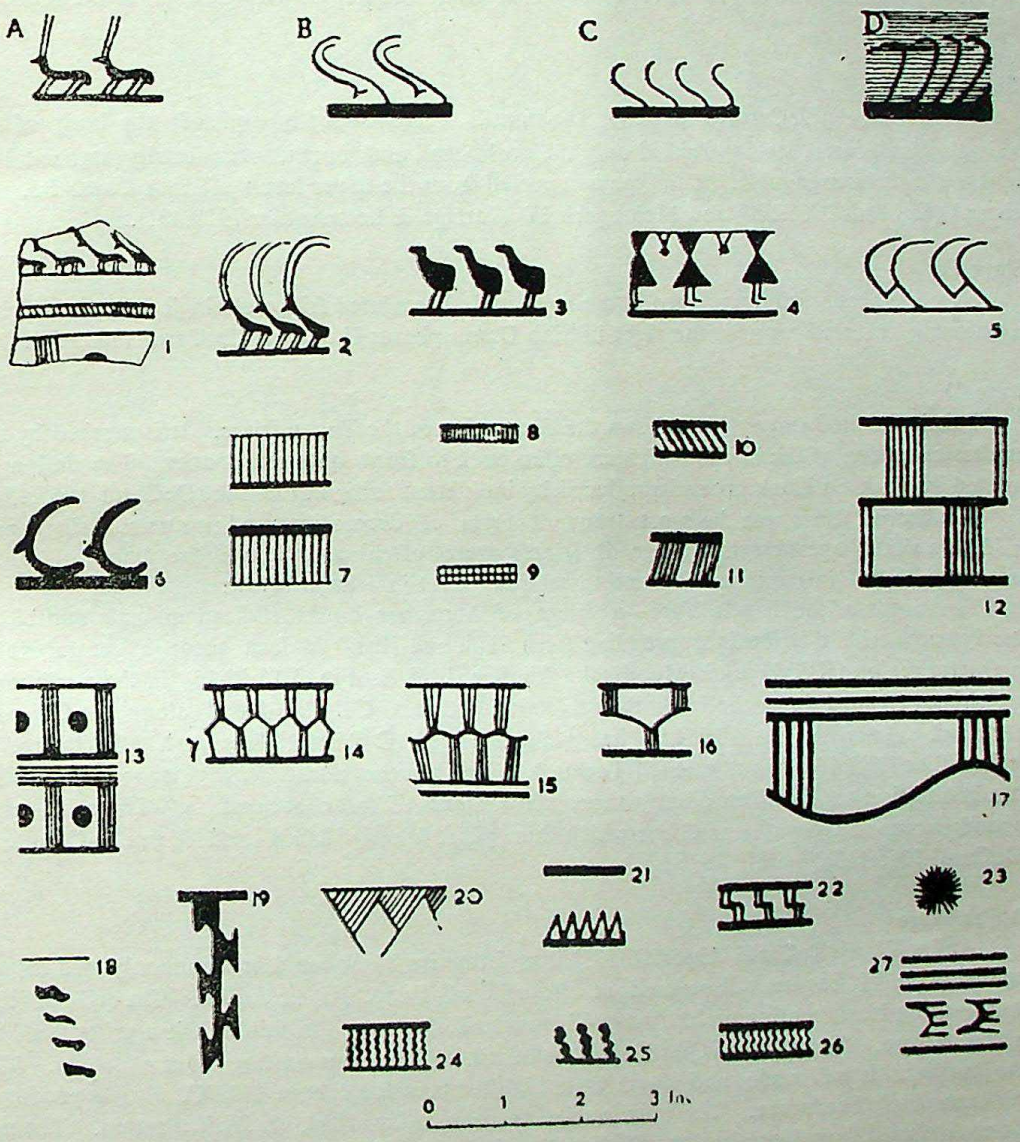


Fig. 3.36. Togau Ware.

Four stages (A-D) have been classified in Togau Ware and were confirmed stratigraphically at Siah Damb (DeCardi 1965:130-131).

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**Stage A**

At this stage (DeCardi 1965:130), the Togau frieze of a single row of processing animals, usually caprids but occasionally birds, and in one example linked human figures, occurs. These figures invariably face left and are painted in solid black on a light orange red slip, often streak burnished over the painted decoration. No evidence of this stage is found at Siah Damb. However, this stage of Togau Ware is reported from Mehargarh III (Jarrige & Lechevallier 1979:482).

**Stage B**

In this stage (DeCardi 1965:131), the motifs become highly stylized; the body of the animals disappeared, leaving behind only the neck, head and horns, occasionally stylized but always clearly recognisable. The type is reported from the lower levels of Siah Damb Pd. II, phase I (DeCardi 1965:109) and Mehargarh IV (Jarrige & Lechevallier 1979:491).

**Stage C**

Here the heads and horns turn into simple and abbreviated fringe of single horn or hooks, occasionally reversed towards the right in Siah Damb phases II and III (DeCardi 1965:131).

**Stage D**

This is the final stage which shows the decoration of the Togau frieze. It is marked by the careless execution of the hooks which are often back to front question marks. The design is painted in black on black ground produced by indifferent firing in the kiln (DeCardi 1965:131).

The horned frieze was the most frequent form of decoration and occur as a single row inside the rim of open bowls. Stage B friezes were often used above the bands of ladder pattern, with ball-in-panel or loop and tassel designs set in a band below.

The motifs of the Togau Ware—a frieze of horns or hooks, stylized animals and birds, clearly had a wide distribution, spreading from Sialk and Hissar in Iran through central Kalat to Quetta region (KGM) and Mundigak (Shaffer 1978 B: Fig. 3.15:15-16) in the north, and stretching eastward down the Mula Pass to Jahan and via Chhutijo-Kund along the Gaj pass into Sind. Amri IA (Casal 1964:91) has yielded Togau C Ware, Mehargarh III (Jarrige & Lechevallier 1979:491) has unearthed Togau A Ware. In the Surab Valley it occurred on six sites in addition to Siah Damb but others show signs of later occupation. There is a large mound known as Gorpat near Gidar which has yielded only KGM and Togau A-C pottery (DeCardi 1965:113).

**Anjira Ware**

Pl. 25

Anjira Ware (DeCardi 1965:166-173) is a distinctive black or less commonly red colour coated ware. It has been discovered at the end of Period III at Anjira. The style of this ware—using black coating on buff ware—is new to Kalat area. In fabric, it is a gritty, buff to greenish ware. The surface is hard when well fired. The colour coating flakes off easily. The Anjira Ware is well made and fired at a high temperature, above 1100°C. It has produced an exceedingly hard ware. The ware varies from medium thick to distinctly thin. The pot forms included from large jars to bell shaped and sinuous sided bowls, a collared flask, some miniature pots and basins.

Cordons and comb incisions were the only types of decoration on this ware. The cardons were made on the outer walls of the vessels. These cardons are marked by single, straight

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or wavy ridges, made by luting a thin coil of clay to the surface and smoothing it down with the fingers. Sometimes double or triple cordons have been found in some sort of combination. Occasionally, the wavy cordons were used for the snake forms, some with small diamond-shaped heads, others resembling cobras with expanded hood and forked tongue clearly marked. These occur singly, sometimes in group also, around the bowl.

Comb incising in straight or wavy bands was generally done with a five roothed implement which cut into the body of the ware.

The Anjira Ware is widely distributed in southern Baluchistan. It is found with Kulli wares at Shahi-tump. At Nal a dark cordoned ware is also mentioned. However, it is not illustrated in the publication, but the possibility of its being Anjira Ware seems to be confirmed as Nal pottery and Anjira Ware both have been found together on the surface of Badrang Damb, Pak and Thale Damb in southern Baluchistan (Stein 1931: Pl. II).

A ware with wavy ridges in relief was noticed at Niai Bhuti with Nal pottery by McCown but seems to be more common in the Kulli levels on the site.

In Surab region it appeared at the end of Period III but became dominant in Period IV only. Tepe Yahya IV has also yielded a few sherds of Anjira Ware (personal examination).

**Faiz Mohammad Grey Ware** *Fig. 3. 37*

This ware was very popular in Baluchistan. It is wheel-thrown, of fine variety with smooth texture and smooth surface finish. It has been classified under three variants (Fairservis 1956; 263, Fig. 55a).

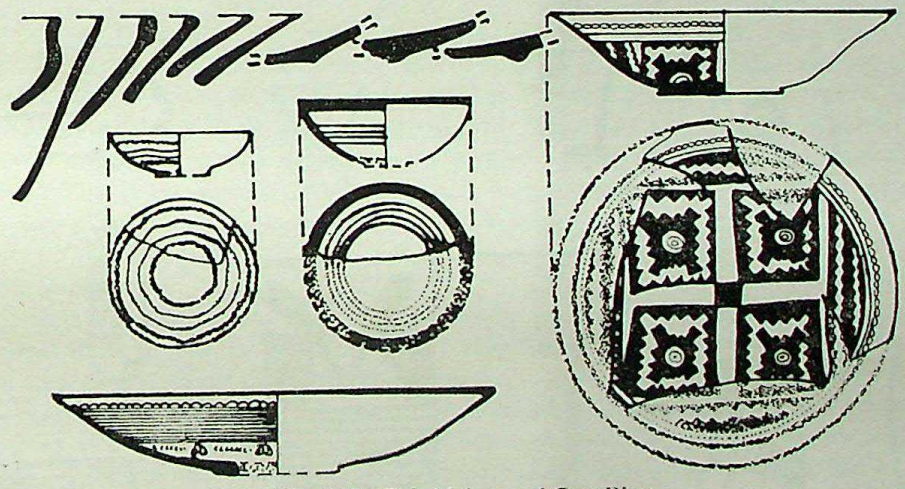

Fig. 3.37. Faiz Mohammad Grey Ware.

1. Fine undecorated Grey Ware
2. Black-on-Grey Ware
3. Red-on-Grey Ware

There is no stratigraphic difference among these variants. The forms are normally platters or plates with ring bases, most commonly used in Period G2 (DS II).

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In Variant 2 the bold geometric patterns are executed in black on grey interior of the vessels. The painted repertoir is marked by the terrace, hanging loops, wavy verticals, zigzags, horizontals, interlocking zigzags, *pipal* and other leaves, sun-ray circles and dots, saw tooth triangles and simple diagonals, floating sigmas and probably snakes. Stylized birds and floral motifs occur frequently. In Variant 3 the geometrical and floral designs are painted on the interiors of open vessels in dull red or brown red. The motifs are similar to black-on-grey ware. A few motifs come as additions: pine needle motif, checker motif, parallel saw-teeth, a tendril, leaf pattern, the double stem *pipal* leaf, etc. (Fairservis 1956:326).

Faiz Mohammad Grey Ware has also a wide distribution. It has been found in Quetta (Fairservis 1956:263), Zhob-Loralai (Fairservis 1959:430), Kalat (DeCardi 1965:176) and at Mundigak (Casal 1961: Fig. 87). Across the borders it is reported from Shahr-i Sokhta, Bampur, Shahdad and Tepe Yahya (personal examination).

**Quetta Ware**

*Fig. 3.38*

The Quetta Ware is a wheel-turned pottery with smooth texture and smooth finish. Pots are painted with black designs in the areas between multiple rows of horizontal lines. Two variants have been noticed in the Quetta Ware:

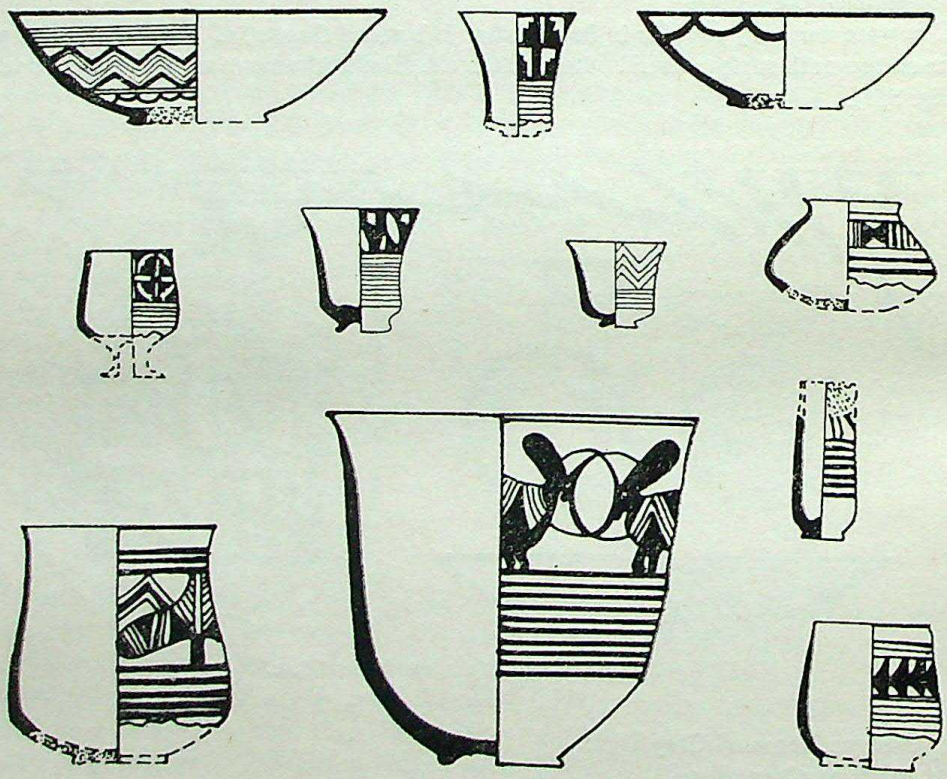

Fig. 3.38. Quetta Ware.

1. Quetta black-on-buff (Fairservis 1956:255-256, Fig. 48-49).

Quetta black-on-buff ware was at its height in DS II-III. The shapes in this ware are

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characterized by jars with flaring or straight rims, small mouthed bowls with a sharp angle between shoulder and base and pedestalled jars. The pedestals are short and sturdy or long and rather slender. Usually bold geometric designs are executed in black on light buff slip, and occasionally stylized animal or floral motifs occur.

2. Quetta black-on-surface has got three variants, based on the differences in the surface colour of the vessel after firing (Fairservis 1956:259, Fig. 48-49).

1. Black-on-brown
2. Black-on-red
3. Coarse black-on-brown

The forms of the pots were the same as of Quetta black-on-buff ware. However, open bowls and platters with interior painted decorations are the typical types of this ware not usually found in the buff slipped Quetta Ware. Motifs included scallops, loops, festoons, horizontal bands, zigzag diagonals, crosses, terraces, willow leaf, grid work, diamonds, dots, circles, discs and eyes, triangles, diagonal hatching squares and rectangles, interlocking key, comb motif, dots, and dashes, sigmas and chevron. Floral motifs are painted in three forms: needles, leaves (*pipal* leaf) and stem forms. Faunal motifs are represented by fish, bird, bull, ibex or gazelle (Fairservis 1956:321-326).

Quetta Ware has a wide distribution as well as a long span of time, ranging from Period I to Period G3 of Fairservis's sequence. In Quetta region almost all the sites of Damb Sadaat II Period have yielded this ware (Fairservis 1956:350). In Zhob and Loralai (SJ III) (Fairservis 1959:300) and in Kalat (Anjira III-IV) this ware also existed. But down south to Kalat this ware could not be traced. However, some geometrical elements have penetrated into the ceramic industries of Nal and Kulli but it is significant to note that the motifs are not identical. This ware has been found at Mundigak III (Shaffer 1978B: Fig. 3.19 & 20), Shahr-i Sokhta I (Tosi 1969; Biscione 1974) Gumla II (Dani 1970-71:109) and Namazga III (Masson 1972:94). Earlier the origin of this ware was traced to the south-western Iranian pottery, especially the pottery of Tal-i-Bakun and sometimes to north Iranian pottery also. However, recent discoveries clearly show that its original home is in Turkmenia.

**Kot Diji Pottery**

Though Kot Dijian Ware is recognisable by its distinctive features, which remained unchanged from the beginning to the end of the Kot Dijian settlement, the stratigraphical studies have revealed its stages of development. It is characterized by wheel-thrown pottery of fine thin body, well lavigated clay and from pinkish to red colour paste. The broad band around the neck in red, brown, sepia or warm black on cream or dull red surface is the most distinctive feature of this pottery. Thin black horizontal lines or single or multiple wavy lines are painted below the bands (Khan 1965:42-45). *Fig. 3.26*

In its formative stages the pottery is marked by almost neckless and rimless forms of thin texture containing painted bands around the neck. In later stages, the neck was more elaborate and painted designs in black and white began to appear. The typical shape is squat and globular pots with wide mouth. The principal forms included dishes-on-stand, open mouthed globular jars with short everted and beaded rim, flat based straight walled and wide mouthed cylindrical vases, elliptical jars with prominent flange or external ledge for lids, bowls and flat dishes and jar-lids with a fine solid or ring knob on top. Dishes-on-stand were very popular.

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Geometrical motifs are limited. They consist of plain neck bands, single and multiple loops, horizontal and wavy lines, roundels and simple triangular patterns. Gradually, these became multiple and complex, taking the embroyonic shape of such important Harappan motifs as fish-scale, intersecting circles and linked roundels. A complete pot showing the fish-scale design has been found (Khan 1965: PI.XVII A) Except the horn deity in black and white on a dark brown glossy slip, the horns encircle six petalled sun flowers and the eyes are indicated by dots, no other faunal motif has been observed on this ware (Khan 1965:PI.XVII B).

*Fig. 3.26A*

Kot Dijian Ware is distributed over a very wide area. In Sind its limits seem to be located at the southern extremity of the Kot Dijian culture-area with penetration west of the Indus into the Amrian culture-area and cross the Kirthar range into Kalat and the Quetta valley (Jarrige & Lechevallier 1979:530). In the central part of the Greater Indus Valley, Bahawalpur region probably marks the centre of the Kot Dijian culture; at least 20 sites revealed the Kot Dijian material. All are heavily concentrated along the dried bed of the Ghaggar-Hakra river (Mughal 1970: 99-100).

In the central Punjab, this ware is reported from four sites—Bhoot or Kalapar (Field 1959: 192), Harappa, Jalilpur (Mughal 1974:110( and Vainiwal (PA. 1967:6). Its extension to the north is attested at Sarai Khola (PA. 1968:36) in the Taxila Valley and to the north-west in the Gomal valley where Gumla (Dani 1970-71:144 ff), Hathala, Rehman Dheri (Durrani 1981:133-138), Karam Shah and Lewan have yielded this ware. On the east it extends to Ganganagar (Rajasthan) whereas at Kalibangan it exists along with the Sothi Ware (Thapar 1975; Lal 1976).

The Kot Dijian Ware covers the longest area of any known pre-or Early Harappan assemblage, roughly 1,40,400 square miles. However, this ware has so far not been reported from southern Baluchistan.

**Amri Ware**

*Fig. 3.23*

Amri Ware (Casal 1964:11-14) is marked by thin fabric rimless vessels painted with geometric and other motifs along with the plum-red bands on either side (above and below) in black redish brown and chocolate-on-buff or sepia body. The pottery is wheel-turned. Bichromy in the decoration is the main feature of this pottery. These features are best applicable to the pottery of Amri IC and ID; the wares of Amri IA and IB are somewhat different. The pottery is usually handmade with a brick red background on which geometrical designs are painted with a thick brush in black, often with plum red filling. Classical Amri pottery appeared in small number in Amri IB. This rough handmade pottery seems to be ancestral to the classical Amrian ware.

Most of the patterns consist of geometric designs combined with measured strokes of the brush. Animal representation on the pottery appeared in the last phase of Amri period. A very fine example presents a dog painted on a vase but mostly the stylized bulls are painted in stereotyped manner on brown or yellowish surface. A number of potsherds at this level also depict animals which are generally ascribed to the Kulli-Nal culture. The abnormally elongated and striped body of the bull attests the deviation of this motif.

Normally the neck and shoulders of the vessels are painted in brown, or red and black over buff slip or light red wash. In Amri IA the bichrome pottery is reported in small quantity. The designs are painted in brown or red and black over buff slip. The plain ware shows red or light red fabric.

The main pottery shapes of Period IA bowls, pedestalled vases and large vessels with 'guilloche' external surface. In Period IB the bowls, and large basins vases with bichrome decoration

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continued, but the decoration became more elaborate triangles arranged with opposite bases and filled in with red or leather coloured background. The dishes-on-stand and carinated bowls were introduced in this period. In phase IC fiftyfive per cent pottery is wheel-thrown. The basic forms of the pottery, however, remained unchanged. Painted designs elaborated in the form of panelled net motifs, consisting of triangles filling half of the square and with one side curved. In addition to black and red colours, the bands are painted in ochre yellow and plum red on buff slip. This gives polychrome effect. In Period ID further development took place. Some vessels are luxuriantly decorated and they in fact marked the climax of this Amrian Ware. In addition to geometric designs, animal motifs included the humped bull.

In Period IIA new bowl-shapes with prominent carination below the rim and profusely painted on the external surface were introduced along with medium sized globular vases and basins. The bichrome tradition continued. The fish-scale motif with dots of Period ID now became simpler. The *pipal* leaf design was, however, introduced.

The Amrian wares, characterized by bichrome decorations and elliptical vessels with short necks, are widely distributed over an area of 8960 sq km in the lower Indus Valley, to the west of the present river course. Majumdar, Krishna Deva and McCown have explored a number of sites, several of them related to Amri occupation (AI 1949:12-30). At least twentytwo sites yielded Amrian wares. Out of these ten sites revealed exclusively Amrian pottery, eight Amrian and Harappan wares, three Amri, Nal and Harappan, and one exhibits Amrian and Nal wares together (Mughal 1970:Table 5).

Despite extensive exploration no evidence of actual Amrian wares has been reported east of the Indus, west of the Kirthar range into the Las Bella valley. However, certain decorative elements of Amrian style are present in central Baluchistan.

Amrian pottery extends down to the Indus deltaic region of Thatta District, east of Karachi, where the site of Tharro hill marks the southern-most limit for Amrian Ware (Majumdar 1934:20-21). The Amrian bichrome exists at Siah Damb in the Surab region of northern Kalat.

The painted style of the so-called 'Kechi Beg Polychrome' in the Quetta valley resembles the Amrian pottery (Fairservis 1956:259-261). Further north-west, Mundigak III (Casal 1961: No. 49, 76, 85 etc.) in southern Afghanistan yielded this bichrome pottery. The presence of the so-called Faiz Mohammad Grey Ware of the Quetta region and Togau and Nal wares of central Kalat in the Amrian culture zone witness the influence from the adjoining hills to the north and north-west (Majumdar 1934: XXVIII 38 cf.). Amrian maintained contacts with Kot Dijian across the Indus. The Amrian ware remained confined to lower Sind but it did contribute to the frame-work of the Pre- (or Early) Harappan cultural phenomenon of the Indus plains. An Amrian potsherd, found on the surface of Tepe Yahya, does indicate the contacts of southern Baluchistan with southern Iran, however marginal it may have been.

**Kalibangan I or Sothi Ware**

Pottery, unearthed at Kalibangan I is very distinctive in fabric, form and designs. The total pottery assemblage is represented by six Fabrics: A to F (Lal 1979:70-74; Thapar 1975: 21). **Pl. 23**

**Fabric A**

The pots were made carelessly on the wheel leaving the striation marks weak and irregular. No slip seems to have been used. The colour of wash ranges from dull red to light pink. The designs were executed on pots in two colours—a basic black, often supplemented with white. Usually the upper part of the body is painted with thick bands. Other designs comprise the *Fig. 3.29*

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criss-cross oblique lines, a row of semi-circular arches with the upper intervening space either hatched or filled, latticed triangles, rows of loops probably fish-scale motif. Shapes are marked by the vases with everted rim, globular body and disc/ring/pedestal-base and bowl and basins with convex or tapering sides.

**Fabric B**

*Fig. 3.30*

This fabric is represented by only one shape—a large jar with globular body and everted rim. Red slip is applied to surface from the rim down to the shoulder and a further coating of sandy clay was provided below that which was roughened either by combing it or by impressing it with tortoise shell or through some other means. The upper slip portion is decorated with thick or thin black bands while the lower rusticated sand-clay coating present a number of motifs, including faunal motifs (stag, bull, duck, scorpian, etc.) and floral motifs (five petalled flowers, stylized sun flower, etc.). In the case of floral motifs, the white pigment is also used.

**Fabric C**

*Fig. 3.31*

Fabric C is characterized by fine clay, a red to plum coloured slip all over the body and black decoration, rarely white also, careful potting, and sturdiness. The motifs included thick or thin black bands, metopes, cross-hatched loops, a row of filled in and apex-down triangles, fish-scales sometimes interspersed with dot. The most unusual depiction is the representation of a fowl underneath a banana plant. The main pottery types are the elongated vases, bowls and basins, dishes-on-stand or cups-on-stand and lids.

**Fabric D**

*Fig. 3.32*

This fabric is also represented very limitedly. It is quite sturdy and shows red slip. This fabric is marked by two flanged jars, a tall cylindrical vessel and troughs and basins. On the interior of these basins the deep incised decoration is noticed and on the exterior the cord impression and/or horizontal bands in black are executed.

**Fabric E**

*Fig. 3.33*

This fabric is represented by reddish buff or pure buff colour. The motifs are painted in black and white colours. Designs included linear and curvilinear motifs, floral designs and faunal motifs like the fish and fowl. The shapes in Fabric E are vases with elliptoid body, jars with or without flanged rim, basins, knobbed lids, cups-on-stand and dishes-on-stand.

**Fabric F**

*Fig. 3.34*

It is known by its grey colour. The main shapes included dishes-on-stand, globular vases, bowls and basins with ring base. Simple linear and curvilinear motifs are painted in black, rarely with white on grey surface.

Some graffitti marks have also been reported on these pre-Harappan potteries (Lal 1979:75).

These 'fabrics', although are not based upon scientifically arranged characteristics since none of the characteristics used for defining one fabric has been uniformally applied to all the fabrics, together these are also known by the term Sothi Ware eversince A. Ghosh (1965:115) had first identified it at the site called Sothi, now practically non-existant, in the Bikaner deserts, along the Ghaggar. The total ceramic repertoire is in fact distinguished by its pale red colour, sometimes ill-fired and of medium to thick fabric. All the pottery is wheel-thrown. The

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exterior of the vessel is either plain and without slip or is applied with a sandy striated coating which is more often painted with black and some white, as a secondary colour. The total assemblage comprized the thick bodied ring based bowls or basins containing incised decoration in inner side, narrow necked globular vessels, bowls with disc base or pedestal footed, offering stands, jars with flanged neck, large vessels with straight vertical neck and prominent rim, small vases with short neck or with everted rim and painted on the neck or shoulder with a wide band. The painting is mostly executed in black or brown with the secondary use of white. The motifs include semi-circles, crossed and parallel lines, crosses with dots at the end, leaf and moustache like design probably horn motif, tree, triangles, fish-scale, pipal leaf flanked by horns, goat or ibex.

This Kalibangan I—Sothi complex is distributed along the banks of the Ghaggar-Hakra or Saraswati river in Pakistani and Indian territories and eastward on its tributory, the Drishadvati. Its full extent is still not known. However, a few explorations in India and Pakistan throw some light on its extension. Around nineteen sites explored by Stein, in both India and and Pakistan, contain Sothi Ware. It has neither been reported from the lower Indus Valley nor from any part of Baluchistan. Khan has reported a few sherds from Kot Diji. It has been found at Sarai Khola and Jalilpur. It occured positively at Sandhanwala below the mature Harappan level. At the present state of our knowledge it may be assumed that Sothi Ware is concentrated in the northern parts of Rajasthan in the Ghaggar—Drishadvati basin, covering roughly 67450 sq km area (Mughal 1970:102). A few excavated sites of Sothi ware in India are Bara, Roper I, Kalibangan I, Mitathal I, Siswal A, Banawali I and Manda IA. Suraj Bhan called the pottery from the lower levels of Siswal as Siswal A ceramics. This pottery is very much similar to Kalibangan I-Sothi Ware. It is now found all over the eastern Punjab, Haryana and even western Uttar Pradesh (Gupta 1982; Joshi 1982; Shankar Nath 1982).

**Kulli Pottery**

Kulli Ware is fine wheel-turned ware, manufactured from a buff paste. The patterns are painted in black over a light terracotta or buff ground. Often a dark red colour is used in horizontal bands dividing different zones of decoration.

'The typical painted decoration of Kulli Ware consists of zones of non-representational motifs between which, in many cases, runs a frieze or naturalistic representations of animals and plants. This type of frieze is very peculiar to Kulli pottery and forms a single continuous band around the pot. The frieze offers a standard scene in which two animals, usually humped cattle but sometimes felines, dominate in grotesquely elongated form along with a landscape presented by stylized trees and sometimes ancillary rows of diminutive stylized goats. Above these major animals W shaped figures, probably the conventionalized birds, and a fish are painted. Various rosettes and other symbols fill the background on some pots. Later on the design lost its beauty by being crowded with irrelevant symbols and by the heavy and clumsy depiction of cattle and trees. The whole pattern is executed in black with a flexible brush. The body of the animals are filled by thick stripes or by a neat diagonal cross-hatch of fine lines. The eyes are drawn as a full circle and the whole body is stretched though the legs, the hoofs give the normal touch. Cattle are typical humped form (*Bos-indicus*). The goat figures are more stylized and may equally well represent black buck or ibexes. Fishes are sometimes painted as a continuous band on shallow plates. Wide varieties of trees, birds and geometrical motifs are used by the Kulli potters. Geometrical designs included wavy hatched

*Fig. 3.39-42*

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bands between horizontal lines, double triangles, point to point hatched triangles, diamonds and lines of solid triangles, band of pendant loops, sigma, eye motif or a dot within a circle or oval.' (Piggott 1950:101-2).

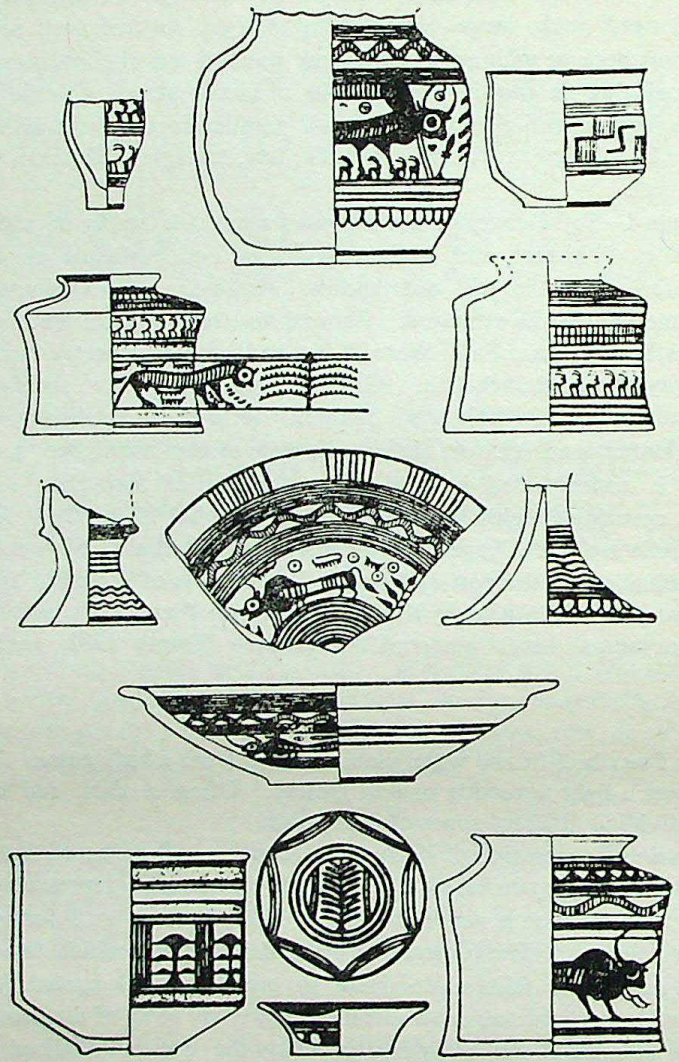

Fig. 3.39. Kulli Painted Pottery.

The main pottery forms include dishes-on-stand, globular beakers, small based flasks, tall bottle shaped vases, small flat dishes and straight sided cups and a squat straight sided jars, conical cups and large storage vessels.

The geographical distribution of this Ware includes southern Jhalawan. Stein excavated one of the major sites of this tradition-Mehi. Dales (1979:265) discovered Kulli Ware in Balakot II with mature Harappa. Casal (1966:10-21) excavated at Nindowari. Fairservis (1971:189-205) discovered the so-called Edith Shahr Complex at Niai Bhuti which is otherwise a Kulli

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site also. This ware has not crossed river Indus, though it has been found on Persian Gulf sites (Thorvildsen 1963:208-219). However, a potsherd from Yahya shows the bull motif of Kulli style. The ware is, however, totally different from the Kulli Ware (personal examination).

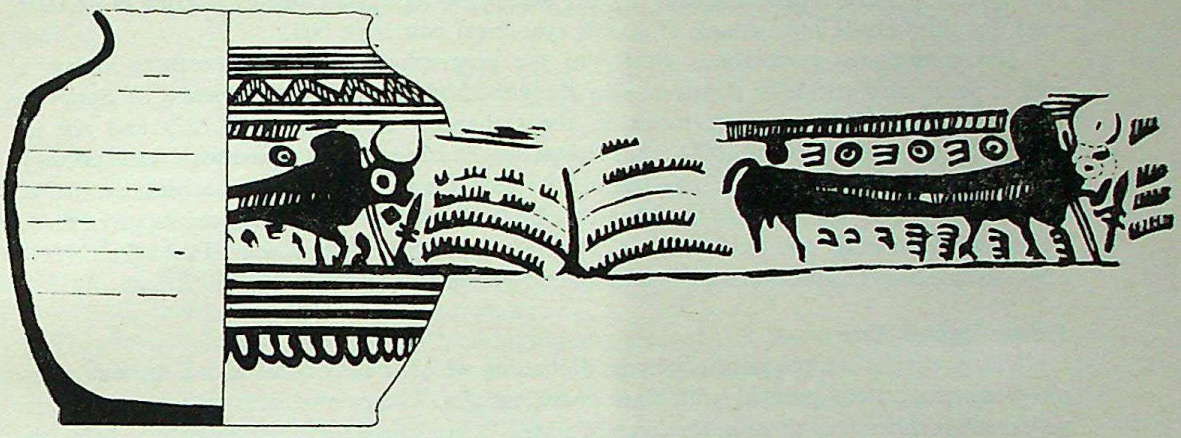

Fig. 3.40. Kulli Pottery.

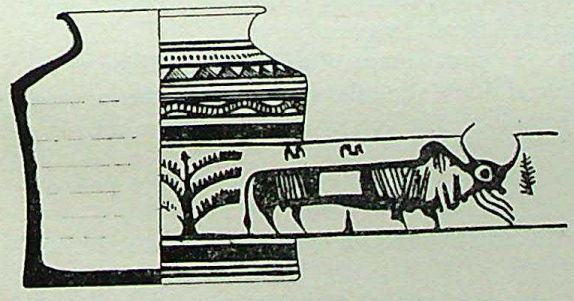

Fig. 3.41. Kulli Pottery.

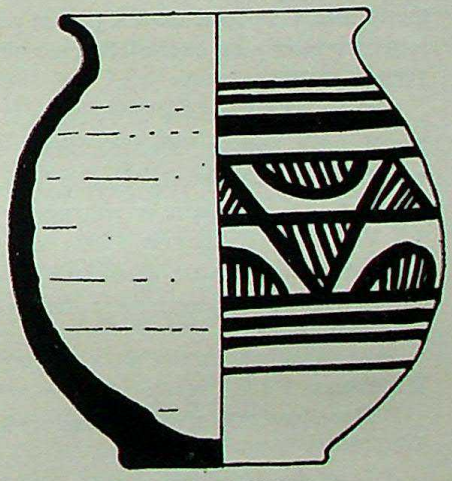

Fig. 3.42. Kulli Pottery.

**Nal Ware** *Fig. 3.16*

Nal pottery was manufactured from a buff paste. At least two major types are marked in the painted decorations: a black-on-buff and a true polychrome. Both the types are wheel-turned (Hargreaves 1929; Piggott 1950:75-95; Shaffer 1978A:124).

The decorations were primarily geometric with distinctive zoomorphic motifs, such as the fish, scorpion, bull and ibex. These are painted in a style which involves utilization of panel designs, often with multiple outlines, including curvilineals. Panels are frequently left open in

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black-on-buff, whereas they are often filled with different colours (black, yellow, red, green and blue) in the case of polychrome.

Geometric motifs include diagonal steps or stepped chevrons, equal-armed crosses, diamonds, circles and numerous variations of over all curved motifs in multiple wavy patterns.

Typical pottery shapes include straight sided canisters, small saucers pinched in on four sides, flat sided bowls and a couple of double cylindrical pots from Nal.

Nal culture-area corresponds clearly to the geographical region of northern Jhalawan with a predictable trickle of sherds on sites along the Mula route but its presence in Sarawan is largely confined to two settlements in the Chhappar Valley (sites 19, 22) and one in Mungachar (site 18) (DeCardi 1984 : 64). Nal pottery has been found mixed with Amri pottery in southern Baluchistan. At Balakot (Dales 1979 : 251) it is found with Amrian pottery. It is also located at a few sites in Kalat area (DeCardi 1965 : 126). It has been reported from Mehargarh VI (Jarrige and Lechevallier 1979 : 507). It existed at Mundigak III (Shaffer 1978b : 124), Shahr-i Sokhta I (personal examination) and Yahya IV C (Personal examination).

**Periano Painted Ware**

This pottery is marked primarily by its decoration which usually consists of a broad over-all geometric pattern painted with black or reddish slip. The painted lines on the average are very much broader than those in the Jangal Painted Ware. The slip is also somewhat duller in Periano Painted than in Jangal Painted. The forms include open bowls, platters, and cups. There are two variants : 1. Black-on-red buff slip, 2. Black-on-red slip: and both are without any stratigraphic difference. Both are wheel-turned with smooth texture and smooth finish. In the former, the geometric designs are painted in black over the buff or cream slip and, in the latter, typically an over-all design painted in black on a redish slip with broad lines (Fairservis 1959 : 367-368).

Geometrical motifs of Variant 1 (Fairservis 1959 : 383) include horizontal lines, some broad, some narrow, multiple lines, verticals on horizontals, cross hatched vertical units, variations of scallops, undulating lines, sigmas, a wheel, triangular-hourglass, concave sided triangles, over all square or rectangular pattering and floral elements.

Variant 2 (Fairservis 1959 : 429) presents a great range of motifs. In addition to the existing motifs there are meandering horizontals, multiple verticals, scallops, etc. the unusual but nevertheless characteristic design is the lucranium. The dots or small circles are used in a great many ways.

**Wet Wares**

Three variants of Wet wares are known: 1. Kechi Beg Wet, 2. Quetta Wet, and 3. Periano Wet.

*Kechi Beg Wet Ware* : It is a wheel-turned pottery of smooth texture ; a type distinguished by large jars with small mouths, usually decorated on the upper half of the body, is differentiated from the Quetta Wet by its decoration. An ambiguous network of ridges scattered thickly and at random over the surface. Some kind of fabric was probably used to form the ridges. The surface of the paste was red or bright pink and the slip was cream or buff (Fairservis 1956 : 269).

*Quetta Wet Ware* : A type similar to Kechi Beg Wet Ware can be differentiated from the latter by its more formal controlled decoration. Its climax is reached in Period DS II. It has two variants.

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1. Variegated Wet, 2. Dendritic Wet.

Both are wheel-turned and of smooth texture (Fairservis 1956 : 269).

*Periano Wet Ware* : It is identical with the Quetta Wet Ware although it is painted. The painting is usually in black and red, or black-on-red, and is found on the rim, neck and sometimes on the shoulder of the vessel. It usually consists of single horizontal bands (Fairservis 1959 : 382).

## THE PLANTS

Baluchistan and Vindhyan-Ganga valley region have witnessed the emergence of first settled communities in South Asia in the sixth-fifth millennium B.C. Agriculture was practised in both the areas. However, the initial domestication of plants is still a matter of discussion : whether the process of domestication of plants took place first in the Indo-Pakistan subcontinent or the already domesticated cereals reached here from some neighbouring area, say Iran or Iraq, during the sixth-fifth millennium B.C.

The data collected from the excavations are fragmentary and do not throw enough light on this issue (Allchin 1969B : 323-324). However, the sites of Mehargarh in Baluchistan and Mahagarha and Koldihwa in the Vindhyan region, by and large, yielded enough cereals to assess the role of agriculture in the Neolithic period. Recently, grape seeds have been unearthed from the 'pre-Harappan Kalibangan' type cultural deposit of Rohira in Punjab (Sharma 1984:15).

**Baluchistan**

Mehargarh I (Pre-pottery or Aceramic Neolithic) has yielded a large number of impressions of several grains and straw of cultivated plants in the mud-bricks and mud debris. Only thirty bricks yielded 5,956 impressions. Costantini has been able to identify from these imprints (actual seeds have not been found so far) several different species (Jarrige & Meadow 1980 : 122; Constantini 1984 : 22-33). They include two-row hulled barley (*Hordeum Distichum*), 2.5%, six-row barley (*H. vulgare and H. vulgare var. nudum*), in largest numbers : 91%, followed by einkorn wheat (*Triticum monococcum*) 4% along with emmer (*T. dicoccum*) and bread wheat (*T. durum or T. aestivum*) which are very few indeed-0.7%. In one brick from MR 3 area, the impression of an almost complete barley spike with a series of four internods fully preserved, was found. In many examples, inside the impressions were found the charred remains of the plants themselves. The presence of all these grain-impressions suggests that Baluchistan was a very early centre of cereal cultivation. Constantini has also noticed the remains of plants other than cereals in the excavated levels of the same phase. Charred seeds of the native plum-like jujube fruit (*Zizyphus jujuba*) and two stones of date palm (*Phoenix dactylifera*) from periods I & II are some of them. It appears that both of them were used as food resources during the Aceramic Neolithic times.

During later periods, the wheat and barley were cultivated. In the ceramic Neolithic phase (Mehargarh II), several hundred charred seeds were reported from a large burnt area outside the walls of one of the structures. They contain different varieties of wheat and barley, and some seeds of cotton (*Gossypium sp.*) next to a compartmented building of period II. Due to poorly preserved condition of the cotton seeds, Constantini has not yet been able to determine whether they belong to cultivated or domesticated variety or not. However, their occurrence along with the seeds of other cultivated plants near a structure, used apparently for storage, suggests that cotton was indeed cultivated by the farmers of Mehargarh II, may be for its fibre or for its oil rich seeds or both (Jarrige & Meadow 1980 : 128). This is therefore the earliest

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evidence of cotton in India. It may be significantly added that the "type of barley present at the site shows some characteristics that can be called 'local'. Biometrical study of the impressions and charred remains indicates that the dominant type of naked barley had a short, compact spike with shortened internods and small rounded seeds. These characteristics, which in the Aceramic Neolithic (Period I) can be ascribed to cultivated, but perhaps not completely domesticated, plants, are very marked in charred barley seeds of the subsequent Periods II and III" (Constantini 1984 : 30-31). Similar situation is recorded at Beidha, Ali Kosh and Hacilar at the beginning of the seventh millennium B.C. where too naked six row barley was the principal crop which supplied maximum of straw also as the binding material for the mud bricks. According to Constantini, the Mehargarh variety is still closer to the Southern Turkmenian type, called *Hordeum sphaerococuum*, but here it is dated to 4000 B.C. (Constantini 1984 : 31).

It is also significant to note that the naked six row barley was alone the most dominant type of barley through the occupation of Mehargarh—it is only in Period VII that the hulled barley showed slight increase in percentage.

What has a slightly different story to tell. The naked variety is also present in the earliest level of the site along with the typical hulled varieties, although in a very small percentage. In fact, it is the hulled varieties, *Triticum monocouum* and *Triticum dicoccum*, which continue through Period VII. Still the naked variety which was only 1 per cent in the lowest levels of Aceramic Neolithic increases in Period II ; in Period III the increase was phenomenal. The increase continued through Period VII.

The hulled wheat of Period I had already undergone an intensive process of cultivation and domestication. However, the genetic history of this variety is not well documented at Mehargarh. Still, on the whole, in Period I (impressions only), naked wheat which can be referred to as *Triticum durum* is present, in Period II (impressions and charred seeds) the morphology of the seeds, while being within the range of variation of the tetraploid *Triticum durum* shows characteristics of small seeded forms, in following periods, morphological and biometrical characteristics permit us to group the great majority of the wheat seeds with hexaploid form *Triticum sphaerococcum*. The Mehargarh evidence thus suggests a shift towards *sphaerococcoid* form. Genetic studies seem to confirm the possibility of morphological convergence between tetraploid and hexaploid wheats. On the whole, it appears that the ecology of the Kachhi plains favoured rounded types of grains.

Mehargarh III passed through the age of agricultural diversification (Jarrige & Meadow 1980 : 130). In addition to the cereals of the earlier periods, two new bread wheats *Triticum aestivum compactcum* and *T. aestivum sphaerococum* and a new barley, *Hordeum hexasticum* were grown. An entirely newcereal genus, oats (*Avena*) has also been reported by Constantini.

During the chalcolithic period the agriculture was practised on a larger scale as is clear by the discovery of the store room containing large storage jars at Mehargarh. Further, near fireplaces, the charred remains of wheat, barley and oats have been noticed along with milling stones. Wine grape of domesticated variety is also added to the agricultural inventory during period VI. It was evidently a foreign element since in the local environment it was not grown. (Jarrige and Meadow 1980 : 132). This shows that sugar content of diet was fulfilled to a large extent.

*Fig. 2.11B*
**Pl. 8**

Sickle was an important agricultural tool. It was generally made of three flint bladelets set at an angle in bitumen, the bitumen in turn had been laid in a groove cut into a wooden handle.

Botanical data from other sites, though fragmentary in nature, support the evidence

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recorded at Mehargarh. The domesticated wheat is reported from Mundigak II (Shaffer 1978B : 149; Allchin 1969 : 323-329). Rehman Dheri (Durrani 1977 : 2; 1981 : 135) has yielded the remains of burnt wheat, barley and other grains. The excavators of Kalibangan have as yet not reported any evidence of grains from the pre-Harappan levels (Period I). Still, the following evidences throw light on the practice of agriculture at KLB-I (Lal 1979: 69): the presence of saddle querns, mullers and cylindrical pits with lime plaster for storing the food grains. The most positive and striking evidence is the discovery of a ploughed-field with furrow marks. **Pl. 22** Cultivation of fruit plants is attested by a painting of a banana plant on the pottery. At Balakot I seven species of cultivated cereals have been identified. Barley (Hordeum) was most common amongst all (Dales 1979 : 257).

**Vindhyan-Ganga Valley**

Evidence of rice, jujube and bamboo have been located in Mahagarha and Koldihwa (Sharma 1980 : 22-23). Rice belongs to the cultivated variety (*Oryza sativa*) (Vishnu Mittre 1977 : 141). Probably the domestication of rice took place in this area earlier than at any other place in South Asia. This wild rice of Chopani Mando has been found domesticated by the neolithic folk of Mahagarha and Koldihwa.

## DOMESTICATION OF ANIMALS

The role that the domesticated animals played in the cultural dynamics of the neolithic and chalcolithic now needs no extra emphasis. However, the data from the South Asian sites are very limited and it is really not always easy to present a coherent pictures of the roles that the various domesticated animals played in the subsistence pattern of the pre-Harappan cultures of north-west India and the Indo-Gangetic divide.

In Baluchistan, the Quetta-Kachhi region was inhabited by the earliest farming communities. Mehargarh I has produced sufficient evidence for the domestication of animals (Jarrige & Meadow 1980 : 124; Meadow 1981, 1984). Here although wild animals predominate in the *Fig. 2.8* lower levels, the upper levels have yielded bones of several domesticated varities. The evidence recorded at this site is extremely significant for South Asian archaeology.

Bones of wild animals from lower levels of period I : Aceramic Neolithic) belonged to gazelle (*Gazella dorcas*), wild sheep (*Ovis orientalis*), wild goat (*Capra aegagrus*), swamp deer (*Cervus duvauceli*), antelopes (*Boselaphus tragocamelus*) and wild cattle (*Bos*, perhaps *namadicus*). However, in the upper levels of period I, except for a few remains of the gazelle, wild pig, (*Sus scrofa*) and onagers (*Equus hemionus*), all other remains belong to domesticated cattle, goats and sheep, (*Ovis aries*). It appears that the Baluchi neolithic folk had domesticated all those animal species (wild cattle, wild sheep/goat) which were present in this area during seventh millennium B.C. The excavator feels that at least in the case of the sheep, the process of domestication did take place locally.

Thus like Western Asia, here also, at places like Mehargarh, the cattle husbandary began as far back as 7000-6000 B.C. The neolithic deposit has also yielded a number of bones of the water buffalo (*Bubalus bubalis*).

The water buffalo has so far been reported only from eastern China. At Mehargarh the domesticated cattle predominate in comparison to sheep and goat while in Western Asia it is the other way round. In periad II also thousands of animal bone remains have been found in MR 4 area and almost all of them represent the domesticated cattle, sheep and goat. They may

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have been used for food, for ploughing, for threshing, as pack animals and as a source of milk. The cattle, sheep and goat were dominant during all the periods of habitation at Mehargarh.

The picture that emerges from the faunal studies by Meadow (1984 : 34) shows the following elements :

"First, a shift during the aceramic Neolithic, from hunting of wild animals to the keeping of domestic sheep, goats, and cattle; second, an increase in the importance of zebu cattle in relation to sheep and goats during the course of the aceramic and early ceramic periods; third, a reversal of this trend during later occupations at the site; and fourth, a decrease in the size of the individual domestic animals through time." Meadow (1984:34) has presented a chart detailing faunal remains from following levels :

*Fig. 2.8A*

The Aceramic Neolithic, which now accounts for 12 to 14 metres thick deposit, is crucial for us. The Ceramic Neolithic, periods IIA and IIB, is equally important for the faunal studies since culturally speaking these are the extensions of Period I complex in developing order. Periods VIIA and B and C represent the last phase of the site's regular deposit of the pre-Harappan complex. Sibri is a separate site in the Kachhi plains.

The figure provides another graphic representation of the relative abundance of different taxa for 13 subdivisions of the archaeological sequence in the northern Kachhi Plain. Each column represents 100 per cent of the standardized bone counts from a closely related of archaeological deposits. The columns are arranged in chronological order with the earliest materials represented on the left and the latest on the right. The first eight columns summarize assemblages from Aceramic Neolithic deposits of Period I, the next two are based on assemblages of Period VII, and the last column collects the data from Sibri Damb, located some 5 km from the Mehargarh,' whose material may belong to the late third millennium B.C.

It is to be noted that the Aceramic Neolithic fauna of twelve 'big' games shows that the 'inhabitants hunted animals whose preferred habitats cover a wide range of local environments including the hills, the margins of a nearby river or lake or swamp, and the Kachhi plains itself. Hunting for wild birds and fishing seem to have been of little importance'.

When this evidence is read along with the evidence of palaeobotany, according to which wheat and barley were cultivated from the lower-most levels of Period I a very logical and significant picture emerges: 'Most of the ungulate species are known to enter cultivated fields on the crops. Thus, the faunal profile from the early aceramic layers may, at least in part, result from elimination of crop-robbing animals. Indeed some of these wild species continued to be killed throughout the occupation of the site. Thus a few bones, especially of gazelle, onager and pig have been found in most of the later assemblages. That the people of third millennium (Period VII) knew these animals is attested by grey ware sherds depicting gazelle and pigs. Also of interest is the fact that in the last phase of settlement at Mehargarh (Period VIIc) significant numbers of bones from river turtle (*Trionyx gangetics*) and fish (principally silurids or cat-fish) have been recovered, a circumstance markedly different from almost all earlier assemblages.' In a rare case, an elephant tusk was found in Period IIA.

One other significant fact may also be recorded. The percentage of cattle in relation to sheep, goat, etc. in the lowest level of Period I was only 4 per cent by the uppermost level of this period it rose to 38 per cent and to the middle of Period II (phase B) it shot up to 65 per cent. Although in Period VII, it again came down to 35 per cent still it was quite high, higher at least to many sites of the same period in Iranian pleateau. In the Greater Indus area, the dominance of cattle is also recorded at Jalilpur and Balakot in the pre-Harappan levels.

One thing more. 'High frequencies of cattle remains are the more remarkable when one

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considers that it takes about twice as long for a cow to bear her first young than for a sheep or goat. With the shorter generation span for small bovides, a much larger number of animals can be killed while maintaining a given herd size. Thus for any segment of the archaeological record, small bovides are likely to be over represented compared to their proportion in the living community. A further consideration is that a simple cow or bull will yield more than ten times the meat of a sheep or goat of comparable age. Thus even by level 4 of the deep sounding at Mehrgarh, cattle were probably contributing more to the diet on an overall basis, than all other taxa combined." (Meadow 1984 : 37)

Moreover, "the humped animals are well known for their heat tolerance and for their ability to browse marginal range vegetation. Alluvial areas, particularly along perennial rivers or around water holes, provide suitable pasturage for zebu, herds of which are also sometimes grazed in swampy areas." (Meadow 1984 : 37)

No wonder, cattle became, and has remained since then, the most popular domestic animal in tqe Harappan and post-Harappan periods in the Punjab, Haryana, Uttar Pradesh, etc. And the credit for all this goes to the people of sites like Mehargarh where cattle was first domesticated, a fact which is proved by not only the remains of their bones but also by the fact that as time passed their size decreased, which often happens in the case of domesticated animals.

In the Quetta Valley itself, there is another site contemporary of Mehargarh I. It is Kile Gul Mohammad (KGM). It has also yielded animal bones in large numbers (Fairservis 1956: 382-383). Among the 15000 animal bones, about 200 belong to wild animals. The bones of sheep, goat and cattle (*Bos indicus*) were reported from all the phases (KGM I to DS III). From the age of the teeth it would seem that many of the animals were killed when they were very young. The preponderance of bones of young animals bespeaks domestication.

Significantly, a small quantity of equine bones are found in Phases J to G. According to Fairservis (1956: 382), they are mostly of the onager (*Equus hemionus*).

Comparable with the cultural status of Mehargarh, we have in Kashmir Valley a site known as Gufkral with Aceramic and Ceramic Neolithic assemblages yielding evidence of almost similar nature.

In Loralai Valley, Rana Ghundai has provided some good evidence (Ross 1946: 284-316): 29 bone pieces could be identified as belonging to the domesticated animals. They were the humped cattle (*Bos indicus linn*), sheep, ass (*Equus asinus linn*) and horse (*Equus caballus linn*). The equine bones may as well be of the onager or Khur (*Equus hemionus Khur*), the only wild equine of India.

At Sur Jangal (Fairservis 1959:299) the majority of bones belong to the cattle although the fragments of sheep and goat bones also exist. The bones of the dog and fox are also reported. If the decorative motif on pottery is accepted as a guide, then the cattle bones probably belonged to the humped animals.

At Nal Cemetery six graves have yielded animal bones of the sheep and goat, probably kept as a part of funerary offerings (Hargreaves 1929).

In Damb Bhuthi cemetery bones of the ox were found as part of the funerary food offerings (Piggott 1950:82).

At Amri the presence of domesticated bull (*Bos taurus*?) and goat is attested in Period I. On the other hand, the bones of domesticated sheep, ass and gazelle have also been identified in Period I (Casal 1964:164-169). The specimens collected by Majumdar at Pandi Wahi include those of the domestic goat, and at Othmanjo-Bhuthi bones of *Bos indicus* have

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been located. Jalilpur I (Mughal 1972:119; 1974:110) has also yielded in abundance the bones of cattle, sheep, goat and gazelle. They are mostly burnt and still show sharply cut marks. At Balakot (Meadow 1979:275-315), the faunal remains, in large numbers, included the bones of domestic cattle, sheep and goat, and gazelle. Domestic cattle out-numbered sheep and goats, as at Mehargarh. Amongst the remains of marine fauna, fish bones and mollusc shells only are discovered. The other domestic animals at Balakot I (Meadow 1979:302) are water buffalos, goat and pigs. Wild animals were also there and they included gazelles, horses and *Nilgais.*

The inhabitants of Kalibangan (Lal 1979:70) also engaged themselves, besides hunting, in cattle breeding on a large scale. To the dietary we have evidence of not only cattle meat, but of fish and fowl also.

Mundigak (Shaffer 1978B:149) also yielded the remains of domestic animals in Period I, such as the sheep, goat, cattle, horse and dog. It is significant to note that the wild predecessors of these animals were present in Afghanistan and were also exploited by man. The wild animals whose bones have been found at Mundigak include gazelle, ibex and lynx.

Though the data are limited, still they throw significant light on the faunal pattern of pre-Harappan Baluchistan. The sheep, goat and cattle were the main species of this area. Earlier Allchin, (1969A), Casal, Dales, Dyson, Wheeler and others were of the opinion that the domesticated plants and animals were the results of diffusionary mechanism. Shaffer (1978A), on the other hand, felt that the domestication represents a process, a change in man/animal/plant relationships rather than a specific event in time and space. It increases the possibilities that this important transition was occurring independently at several places during the same period. And this has been represented by the data from Mehargarh and Kile Gul Mohammad in Baluchistan and Jericho, Jarmo and Djeitun Depe in Western Asia. How exactly, biologically speaking, the wild animals of early levels changed into domesticated varieties in the upper levels, we do not as yet know fully well. But that domestication of animals did take place in this part of the world independent of the Near East is now more than clear.

## METALLURGY

Copper is the only metal which has been found widely distributed in nature and extensively used by human beings for the making of tools, weapons, ornaments, utensils, seals, etc. Copper metallurgy was known to the Iranians during the seventh millennium B.C. as attested by the excavations of Tal-i-Iblis. Till a decade ago, South Asian archaeologists believed that India had no local evidence of smelting or working the metal as early as that. However, the recently discovered site of Mehargarh (Jarrige and Meadow 1980 : 128-133) in northern Baluchistan has produced conclusive evidence of the use of copper in this part of the world even prior to that. Mehargarh has yielded a copper bead in the Pre-Pottery Neolithic context and a copper ring and a bead in the Pottery Neolithic phase. However, from the early Chalcolithic period to the Bronze Age, metal working is abundantly evident(Jarrige & Lechevallier 1979: 508-518). The copper objects found include chisels, flat blades and axes. One complete bronze/copper pin with two spirals has been found in Period VII. It recalls the pins from Mundigak IV (Casal 1961: Fig. 139.18) and Banawali (Bisht ahd Asthana 1979: 229) and Manda (Joshi and Madhu Bala 1982: 185-195). However, sites in Surab and Quetta regions have not yielded sufficient evidence of metal working. DeCardi has not found a single metal fragment in the Surab. Fairservis (1956: 231) has reported only a fragment of a knife blade

*Fig. 3.14*

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in the KGM III level, another fragment of a blade and other fragments in DS II-III. The Zhob and Loralai regions have produced relatively more evidence in this regard. Most of these copper objects consist of personal ornaments (Stein 1929: 37-40, 42, 60, 75): a bangle from Kaudani, a bead from Sur Jangal, a finger ring, a rod, and a bronze (?) arrowhead from Periano Ghundai and a copper bangle from Dabar Kot.

In southern Baluchistan, the number of copper objects found even in the trenches is comparatively very large. Kulli has produced a copper awl and a small copper fragment (Stein 1931: 118; Fairservis 1971: 208). Mehi (Stein 1931: 153-163) has yielded a wide range in metal objects with an addition of a new type: copper/bronze mirrors. These include large mirrors with elegant handles, ornamented hair pins, copper bowls, copper disc and copper/bronze bangles (Piggott 1950 : 98, 112 : 113). Nal (Hargreave 1929 ; Piggott 1950 : 89-91) has also given us copper tools (flat-axes and chisels), weapons, beads, and seals; as also ceremonial swords, etc. of silver. At Balakot I, however, metal remains are quite meagre (Dales 1979: 255). Four items of copper and bronze of undetermined shapes and function have been found. *Fig. 3.16*

Mundigak (Casal 1961 ; Shaffer 1978B: 141-144, Figs. 3, 35-36) in southern Afghanistan has, however, yielded a number of metal objects right from Period $I_2$ through Period IV. The earliest example was a flat blade-like instrument. The most frequently found artefact throughout the Mundigak sequence was a simple type of bronze point or punch with a circular cross-section. It was first indentified in Phase $I_4$ and then continued. In Period $II_3$ a true projectile point is identified. This type became more popular in later periods. A tanged lozenge-shaped point and a tanged ovel-shaped point were introduced in Periods III and IV, respectively. A large lance-head and a knife are the only objects to be classed as weapons, found in Period IV. Pins are reported from Periods II to IV. Mirrors, double volute lozenge and flat-headed pins, handles for mirrors, a buckle as well as utilitarian objects like small curved knives, sickles, chisels and a few barbed hooks come from Period IV. Three important metal artefacts located in Period III are the only examples of socket-holed axes (two) and adze (one).

In the Indus basin the presence of copper objects is attested by a few scrapers. A knife blade and bangles occurred in Amri IA (Casal 1964 : 149). A copper leaf-shaped arrowhead with a long tang, an awl and a chisel came from Ghazi Shah (Majumdar 1934 : 86-103). Copper bangles and a fragmentary finger ring were found at Kot Diji (Khan 1965 : 38). In the upper Indus basin, Gumla II-III (Dani 1970-71 : 83), Sarai Khola II (*PA* 1968 : 36) and Jalilpur II (Mughal 1974 : 112) have also yielded the evidence of copper objects. Antimony rods are reported from Gumla II-III. Sarai Khola has given a wide range of objects : antimony rods, pins, nail parers, spearheads, bangles, rings and needles. Jalilpur II has yielded a few pieces of copper/bronze rods (Mughal 1972 : 124). Jalilpur I has given us a rectangular bead of gold sheet with tubular perforation which is unique in such an early context (Mughal 1972 : 119). East of the Indus, copper objects have been found in Kalibangan I (Lal and Thapar 1977 : 82), Banawali I (Bisht and Asthana 1979 : 229), Mitathal, Bara and Manda. Kalibangan I objects, found in hundreds, included an axe, a *parasu*, bangles and beads. Mitathal I-II have yielded five copper objects. Two of them have been identified—two bangles and a long narrow object with a square cross section. Manda (Joshi & Madhu Bala 1982) yielded a double spiral-headed copper pin. Pl. 24

Recently, a new culture-complex has been located by R.C. Agrawala (1982) in northern Rajasthan—it is called Ganeshwar Culture and it appears that its earliest phase may be pre-Harappan in terms of chronological horizon. More than a thousand copper objects with a large variety of implements such as arrowheads, fish-hooks and flat celts have been collected.

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As already mentioned, evidence for the earliest metal working comes from Mehargarh. Fragments of several crucibles, with traces of metal still adhering in them, have been found in Mehargarh III (Jarrige & Meadow 1980 : 130). This evidence confirms copper ore smelting. Two pieces of copper ore, found by Stein (1943 : 166) at Charaiwala and Siddhuwala in the Bahawalpur region, attest to the working of metal in this area. The nearest source of copper in this area was probably the mines of Motaka on the Saraswati river (Gordon 1952 : 62). Two copper mines are located at Khetri and Singhana in Rajasthan. Recent excavations at Ganeshwar in Rajasthan have shown that the area was inhabited during the third millennium B.C., and that people were probably engaged in supplying copper objects to the Harappans. It is equally possible that these people supplied copper ingots or copper objects to the Sothi and other pre-Harappan peoples in the Saraswati valley. From surface remains at Siswal too, we have recovered a crucible with copper oxide remnants.

In Baluchistan, copper has been obtained from the sources lying in the districts of Zhob and Chagai near the Afghani and Irani borders in areas between Ziarat (Quetta district) and Johan (Sarawan sub-district) and Las Bela (Mughal 1970 : 194). However, we are not sure whether all these sources were mined in ancient times, a few certainly were exploited for local industries but when exactly, and how, we do not as yet know.

## SHELL

Shell was very popular in ancient India for making bangles and beads. These ornaments are reported from many north Baluchistan and Indus Valley sites. However, the species of shells have yet to be fully identified. Mehargarh (Jarrige and Meadow 1980), Damb Sadaat II-III (Fairservis 1956 : 130), Mundigak (Shaffer 1978B : 144), Gumla III (Dani 1970-71 : 88), Sarai Khola II (Halim 1972 : 23), Kot Diji (Khan 1965 : 82), Jalilpur II (Mughal 1974 : 112), Kalibangan I (Lal 1979 : 70), Banawali I (Bisht 1976), Balakot I (Dales 1977 ; Durante 1979 : 323), Amri IA (Casal 1964) and Nal (Hargreaves 1929) have yielded shell bangles. Beads, made of shell, have been reported from several sites : Mehargarh I (and in later phases also), Nal, Kot Diji, Sarai Khola II, Kalibangan I. Balakot I has yielded a large number of shell objects but these are yet to be detailed by the excavators.

## IVORY

Objects made of ivory have been reported from a number of excavated sites. Balakot I has (Dales 1979 : Table I) yielded ivory objects though details are not yet available. Mitathal has given an ivory pin. Rehman Dheri (Durrani 1981 : 136) has yielded a square ivory seal, measuring $3 \times 2.7 \times 0.2$ cm with carvings on both sides : two mountain goats and a symbol of T, I and ↑ on one side and two scorpions, a frog and 'T' symbol on either side.

*Fig. 3.6*

## BONE TOOLS

Bone tools are evident from Neolithic times to the Bronze Age. Bone tools were made in the form of awls, needles and spatulas. Bone was also occasionally used for bangles, combs, hair dividers, etc. At Kulli (Stein 1931 : 118 ff) a couple of fragments of bone bangles have been found.

The bone industry existed from the Aceramic Neolithic phase through the Bronze Age as is evidenced at Mehargarh (Jarrige & Lechevallier 1979) where, in every phase, bone tools

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exist. Awls were more numerous in the first four periods of Mehargarh; in the latter three periods, spatulas replaced them. Bone awls or points are reported from Rana Ghundai I (Ross 1946 ; 296), KGM I-II (Fairservis 1956 : 233), Mehargarh I-VII (Jarrige and Lechevallier 1979), Anjira I (DeCardi 1965 : 101), DS I-III (Fairservis 1956 : 233), Jalilpur I (Mughal 1972 : 117-124), Gumla II (Dani 1970-71 : 84-85) and Sarai Khola II (Halim 1972 : 20-22). Bone awls are numerous in Mundigak I-III (Casal 1961 : 230). Needles have been found at Mehargarh I-IV and at Kulli. Spatulas were commonly used by the people of Mehargarh (Later levels) (Jarrige and Lechevallier 1979), Anjira I (DeCardi 1965:177), DS I-III (Fairservis 1956: Fig. 29), Gumla II (Dani 1970-71 : 84-85) and Mundigak III-IV (Casal 1961:230). At Sarai Khola (*PA* 1968 : 36 ; Halim 1972 : 20-22), the bone tool assemblage included chisels, perforators, buttons, combs, hair dividers, pressure flakes, etc. Manda IA has yielded tanged arrowheads of bone (Joshi & Madhu Bala 1982 : 187). Bone tools are reported from Banawali I (Bisht and Asthana 1979), Jalilpur I (Mughal 1972 : 117-124) and Amri IB. Mehi (Piggott 1950 : 113) has produced a small bone stud or seal. However, details of many of them are not available. The bone industry, with slight variations, continued throughout the period of our study.

## TERRACOTTA OBJECTS

Amongst terracotta objects at least a few types shared many ancient cultural traditions, e.g. female figurines, bulls, cart-frames, cart-wheels, bangles, beads and spindle whorls. Terracotta figurines were widely distributed ; they apparently had some ritualistic significance.

**Animal figurines**

The two earliest clay animal figurines, discovered at Mehargarh, are from the Aceramic Neolithic phase (Jarrige and Meadow 1980 : 128). The animals, however, cannot be identified. Numerous clay figurines of humped bull are known from Sur Jangal (Stein 1929 : Pl. XVI), Periano Ghundai (Stein 1929 : 37), Moghul Ghundai (Stein 1929 : 45), Rana Ghundai (Ross 1946), and Damb Sadaat III (Fairservis 1956 : Fig 18-19).

Stein (1931 : 118b) found sixtysix figures of humped bull in the Kulli-Mehi context. But these figurines were found all over the area; one in Mehargarh III (Jarrige & Lechevallier 1979 : fig 12), and four in Mundigak 13-5 ; the number increased in Periods II-III and IV (Shaffer 1978B : 146). In the Quetta region all the so far discovered bull figurines, except for one, belonged to Period DS III (Fairservis 1956). *Fig. 3.17*

Examples of short-horned and humped bulls came from Gumla II-III (Dani 1970-71 : 72-73) and later ones from Sarai Khola II (Halim 1972 : 29), Jalilpur II (Mughal 1972), Kulli (Stein 1931), Mehi (Piggott 1950), Nal (Hargreaves 1929), Balakot I (Dales 1979 : 252), Kalibangan (Thapar 1975) and Kot Diji (Khan 1965 : 83). The presence of bull figurines is also attested at Gorandi and Lohri. The bull figurines are all handmade, plain and painted with black pigments. From the Amri IC (Casal 1964) level, painted and elongated body of a humped bull has been reported. *Fig. 3.22* **Pl. 19**

Mehargarh III has yielded a terracotta dog. Terracotta dogs have been found in Kulli-Mehi complex, Gumla II (Dani 1970-71 : 76) and Sarai Khola II (Halim 1972 : 29). The ram was also known to them, as terracottas from Sarai Khola II, Mehi and Nal show. In a figurine from Periano Ghundai crude craftsmanship only hints at the horse. Models of the sheep

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and the goat have been unearthed in Sarai Khola II (Halim 1972 : 29) and Mundigak III-IV (Casal 1961).

*Fig. 3.13A* Mehargarh VII (Jarrige *et.al.* 1979, 1980) has yielded the figurines of a humped bovine, the zebu, wild pigs and various kinds of birds. Birds are also found at Gumla II-III (Dani 1970-71 : 76).

**Female Figurines**

Terracottas of females, commonly known as the mother goddess, have been found in a wider area, and they differ from region to region both in form and style of decoration. These female figurines are more frequent in Baluchistan than in the Indus Valley. Their rare occurrence in the region east of the Indus has puzzled archaeologists. Possibly there was no single cult of mother goddesses organized in terms of an organized church.

Two distinct types of mother goddesses were, however widespread in northern and southern Baluchistan: Zhob, the mother goddess in north Baluchistan, and Kulli, the mother goddess in south Baluchistan. Both differ in facial features, ornaments and hair styles. However, a recent discovery has added a third type : abstract in form. This type will be discussed a little later.

**Pl.11** The Zhob mother goddess is pictured standing, rarely in sitting-on-stool pose; she has stylized head, goggled eyes and beaked nose, and distinict hair style painted in black. This type is reported from Periano Ghundai (Stein 1929 : Pl. IX), Moghul Ghundai, Rana Ghundai (Piggott 1950 : 126), Sur Jangal (Stein 1929 : 75), Dabar Kot (Stein 1929 : 60), Damb Sadaat (Fairservis 1956 : Fig 16, b, d, f) and Mehargarh (Jarrige and Lechevallier 1979 : 524) in north Baluchistan, as well as from Mundigak (Casal 1961 : Pl. XL1 8-9) in southern Afghanistan.

The Kulli figurines, on the other hand, is marked by prominent bedecked breasts, *Fig. 3.18* an elaborate coiffure, archaic treatment of face and hands placed, against the breast or waist. Several hair styles and different ornaments around the breasts and neck can be seen **Pl. 17** in vogue. These figurines are found mainly in southern Baluchistan ; in the Kulli-Mehi culture-area (Piggott 1950 : 107-109). Two figurines from mundigak resemble these Kulli figurines.

**Pl. 3 & 4** Recent excavations of Sarai Khola I-II (*PA* 1968 : 36), Jalilpur II (Mughal 1972 : 117-124),
**Pl. 2** Gumla II-III (Dani 1970-71 : 64-71), Rehman Dheri (Dani 1970-71 : Pl. 72), Mundigak and Mehargarh (Jarrige *et. al.* 1979) have unearthed female figurines in abstract form. Prior to the excavations at Mehargarh these figurines were thought to be the diffused influence from Turkmenia. However, Mehargarh has added a new dimension to the tradition of mother goddesses ; it has taken their antiquity back to the Aceramic Neolithic period and show their evolutionary stages. Three human figurines of unfired clay have been noted in the Pre-Pottery Neolithic period of Mehargarh. One of them is conically shaped, and has a necklace of applique clay lozenges. The second is seated with two holes for eyes. The third one has its lower part seated, with legs and feet joined.

Mehargarh continuously practised this industry and strove for the naturalistic effect. All these figurines were seated. In Mehargarh VI we come across a large number of nude female **Pl. 11** figurines. This period was probably the peak of this industry. This female figurine had fantastic hairdress, forming two huge coils of hair flanking the head, multiple-strand necklaces covering pendulous breasts, with arms clasped below the breasts and legs tied and seated.

**Pl. 11 & 14** In the last phase of Mehargarh (Mehargarh VII), the so-called Zhob mother goddesses are found in large numbers. At the same site, thousands of legs and arms of these figurines were discovered. This shows that Mehargarh was a great production centre for this industry.

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It possibly also shows, that it was a cult object and the people organized festivals round it, at least once in a year. The nearest analogy that comes to our mind from the present day practice in India is the popular worship of goddess Lakhsmi, made in clay in thousands on the Diwali day.

Significant numbers of a new addition now appeared at Mehargarh : the male terracotta figure. The male figurine has large turbans and neck-tie shaped pendant. It possibly represents the consort of the mother goddess. The two put together foreshadow the practices commonly adopted in Hinduism of the historical period—thousands of years later. **Pl. 13** *Fig. 3.13*

By the end of Perion VII at Mehargarh, the figures took the stereotyped form in north Baluchi tradition—Zhob mother goddess.

**Terracotta Bangles**

There is also an abundance of terracotta bangles—plain and painted both, in Baluchistan and in the Indus Valley. So far they are reported from Mehargarh III-IV (Jarrige & Meadow 1980), Damb Sadaat III (plain and painted both) (Fairservis 1956 : 230), Anjira II (DeCardi 1965 : 177), Siah Damb (DeCardi 1965 : 177), Moghul Ghundai (Stein 1929 : 45 ; Fairservis 1959), and Periano Ghundai (Stein 1929 : 37-38). A terracotta bangle from Periano Ghundai (Stein 1929 : Pl. IX, 32) represents a snake-head and recalls the terracotta snake head from Kot Diji (Khan 1965 : Pl. XXXIX, d).

At Amri, bangles occur in all levels, IA through ID (Casal 1964). Many bangles, plain as well as painted, are reported from Kot Diji (Khan 1965 : 83). Sarai Khola II (Halim 1972 : 25-26), Gumla II (Dani 1970-71 : 88-89) and Jalilpur II (Mughal 1974 : 112) have also yielded terracotta bangles. East of the Indus, Kalibangan I (Thapar 1975 : 21), Banawali I (Bisht and Asthana 1979 : 225), Manda IA (Joshi and Madhu Bala 1982), Siswal (surface), Mitathal I and IIA have given us a large number of terracotta bangles. The bangles are usually round in section and are not different from those of the mature Harappan phase. Bracelets were also made of two or three thin bangles joined together, or deeply grooved on the exterior surface and usually fired grey. These bracelets occur in the pre-Harappan levels of Kalibangan (*IAR* 1962-63), Kot Diji (Khan 1965: Pl. XXXIX, 2), Bhoot and Jalilpur (Mughal 1972:124).

**Terracotta Beads**

Terracotta beads were also popular amongst the Pre-Harappan peoples of Jalilpur I-II (Mughal 1974:112), Kalibangan I (Thapar 1975:21), Banawali I, (Bisht and Asthana 1979:225), Siswal (from surface findings), Mitathal I-II, Amri IA (Casal 1964), Kot Diji (Khan 1965:83) and Sarai Khola (*PA* 1968:36; Halim 1972:24-25). Two types of beads were made in terracotta: biconical and barrel shaped.

**Wheels and Cart frames**

Information on wheeled vehicles is scanty. However, solid terracotta model wheels, often with a single sided protruding hub, terracotta toy-cart frames and bull figurines may indicate that wooden carts with soild wheels were driven by bulls. Wheels and cart frames are, however, absent at the hill sites of Baluchistan. In the Indus plains cart-frames are found at Kalibangan II (Lal 1979:89), Sarai Khola II (*PA* 1968:36), early levels of Mohenjo-daro, Mitathal IIA, and Jalilpur II (Mughal 1974:112). Wheels are reported from Mitathal IIA, Jalilpur II (Mughal 1974:112) (solid wheels with a single or double hub), Sarai Khola II (*PA* 1968:36), Gumla II (the hub-less veriety) (Dani 1970-71:77) and Kalibangan I (solid wheels) (Thapar 1975:21).

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**Terracotta Cakes**

While terraccotta cakes are considered unique to Harappan culture, they have at times, been found in an earlier context. They are usually triangular in shape. These are, however, almost absent in Baluchistan. Only one cake is reported from the surface of Periano Ghundai (Fairservis 1959: Fig. 58), Amri IA (Casal 1964:151) has the earliest known variety: disc-shaped; while in ID, a square shaped specimen and the triangular variety have been noted. The traingular cakes are reported from Gumla (Dani 1970-71: 78-79), Pandi Wahi, early levels of Mohenjo-daro (Mackey 1938: Pl CXII, 4), Kot Diji (Khan 1965:83) late levels of the citadel and all levels of the lower city, Kalibangan I (*IAR* 1962-63), Siswal, Bara, Mitathal IIA, Jalilpur II (Mughal 1974:112) and Manda (Joshi and Madhu Bala 1982). Mundigak IV and Mehargarh VI (Jarrige and Meadow 1980:133) have also yielded these terracotta cakes. Beyond the western frontiers, they have been found at Shahr-i Sokhta (Tosi 1968: Fig. 80) and Tepe Yahya (Personal examination). The exact use of these cakes is still not known although at Kalibangan it is used in places of brick-bats to make thick and strong floors.

**Miscellaneous Objects**

A few other terracotta objects have also been found, such as sling balls, carrot-shaped terracottas, gaming discs, spindle whorls, etc. Kot Diji (Khan 1965:83) has yielded the socalled gaming pieces and the carrot-shaped terracotta cones the actual use of which is not very clear to us. Siswal, Mitathal and Sarai Khola II (*PA* 1968:36) have offered dice. Mitathal and Gumla II (Dani 1970-71:79) and Mehargarh VII have sling balls. Kulli has produced a spindle whorl. These examples clearly show that the clay was the most popular medium of artistic and cultic expression as well as for utilitarian objects of everyday use. The practice continues to this day in many parts of South Asia.

*Fig 3.14*

## LITHIC ARTEFACTS

Stone artefacts can be divided into two categories: 1. utilitarian, and 2. luxury items. Rectangular milling and associated rectangular to oval handstones have been found in all occupational periods at Mundigak. Besides these, some crude mortars and pestles were found in Period I. Stones with a long axis groove occur in Period $III_4$ and continue in significant numbers a in remaining occupations. Large trapezoidal hoes, retouched for hafting, and having polish, resulting from use, were reported from the end of Period I until the final occupation.

Knife scrapers, made out of large cortex flakes, usually retouched along one edge, occurred throughout the occupation at Mundigak. Flint blades and points are noticed for the first time in Period II. These blades are large with triangular and trapezoidal cross-sections, but found rarely. Microlithic blades appeared in Period $III_{5-6}$ in a large number and continued in later occupations. Bifacially flaked lanceolate flint points, large and small, were introduced in Period II and continued throughout the occupation. In Period IVa new type of point appeared which is triangular, with a round base. Period IV is characterized by several examples of small concave sided cylindrical objects with central perforation made of alabaster and other hard stones and Quetta Ware style geometric motifs engraved on the sides (Shaffer 1978 B: 139-140).

The lithic industry of Mehargarh includes polished axes, round in section, with slightly

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convergent sides and sharp cutting edge and long blade tools. The partially polished and fully polished adzes and axes, usually of chlorite, are however, very small in number and present the usual characteristics of the heavy duty tools. These tools are usually found in Period I only exceptionally in Period II (one) and Period III (two), and none later. The blade tools, on the other hands, are found in large numbers, and therefore they should be taken as the items of the most representative group of lithic implements at the site. They include about twenty types, as may be seen from the following chart prepared by Monique Lechevallier (1984: Table 7.2). Among these blades predominate which possibly shows that the people were engaged in agricultural pursuits since these were perhaps used largely as sickle blades since actual examples of wooden sickles with blades fixed in bitumen have been found. *Fig. 2.7.*

**Flint artefacts of Mehargarh**

| Types | Period Ia | Ib | Ic | IIa | IIb | III | IV | V | VI | VII |
|---|---|---|---|---|---|---|---|---|---|---|
| Cores | 46 | 134 | 231 | 32 | 74 | 73 | 4 | 4 | 22 | 43 |
| Core tables | 12 | 31 | 36 | 3 | 10 | 11 | — | 1 | — | 4 |
| Hammering stones | — | 15 | 7 | 3 | 1 | 7 | 1 | — | 1 | — |
| Blades | 241 | 1546 | 1901 | 420 | 1080 | 1060 | 43 | 84 | 245 | 249 |
| Bladelets | 376 | 2458 | 8462 | 482 | 1120 | 652 | 60 | 48 | 197 | 148 |
| Flakes | 239 | 542 | 420 | 126 | 351 | 1086 | 33 | 132 | 203 | 303 |
| Burin spalls | — | 4 | 6 | — | — | 5 | — | 2 | 3 | 3 |
| Geometric microliths | 32 | 23 | 102 | 4 | 11 | 3 | 9 | 66 | 24 | |
| Sickle blades | 12 | 40 | 42 | 8 | 84 | 227 | 21 | 5 | 90 | 115 |
| Burins | — | 1 | 3 | — | 2 | 103 | 8 | 8 | 36 | 50 |
| Borers | 9 | 82 | 95 | 22 | 64 | 66 | — | 1 | 2 | 12 |
| Pointed blades | 2 | — | — | — | 3 | 1 | — | — | 10 | — |
| End-scrapers | 3 | 11 | 22 | 5 | 7 | 36 | 2 | — | — | 18 |
| Truncated blades | 4 | 9 | 43 | 4 | 15 | 15 | 5 | 5 | 31 | 47 |
| Notched blades | 2 | 30 | 29 | 5 | 8 | 3 | 2 | — | 5 | 6 |
| Backed blades | 3 | 4 | — | 3 | 3 | 17 | — | 1 | 1 | 10 |
| Retouched blades | 64 | 471 | 965 | 51 | 203 | 225 | 23 | 19 | 144 | 221 |
| Used blades | 83 | 608 | 1179 | 90 | 333 | 322 | 36 | 71 | 198 | 229 |
| Retouched flakes | 27 | 7 | 11 | 1 | 9 | 92 | 6 | — | 10 | 16 |
| Axes—Adzes | — | 12 | 16 | — | 1 | 2 | — | — | — | — |
| Arrowheads | — | — | — | — | — | 6 | 3 | 2 | 48 | 53 |
| Total | 1155 | 6028 | 13570 | 1059 | 3299 | 4012 | 256 | 385 | 1312 | 1551 |

A total of about 32000 implements were collected from the site of which over 20000 belong to Period I; 4000 each to Period II and Period III. On the other hand, Period IV to VII put together yielded only 3500 tools. The trend may possibly indicate that as time passed, reliance on lithic tools decreased and the use of metallic tools increased. The trend continued through the Harappan times in the Indo-Gangetic divide also.

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The blades were usually produced out of river borne grey to brown fine quality flint nodules with which Bolan has been full. The other stones used are phtanite (for drills of Period III) and jasper and schist (for arrowheads in the last two Periods) below is given another chart prepared by Lechevallier (1984: Table 7.5) which shows dimensions of flint cores.

**Mean dimensions of Mehargarh flint cores (in mm)**

| Period | Length | Width | Thickness | Number |
|---|---|---|---|---|
| I | 37.8 | 23.4 | 16.8 | 50 |
| II | 42.6 | 27.5 | 17.8 | 50 |
| III | 34.6 | 26.9 | 22.6 | 40 |
| IV | 39.3 | 32.3 | 24 | 3 |
| V | 24 | 31.3 | 25 | 3 |
| VI | 41.7 | 30.5 | 14.5 | 4 |
| VII | 49.5 | 30 | 21.2 | 41 |

The details show that with the progress of time, the proportion of bladelets to blades decreases but their thickness increases. 'In the last periods, the blades are characteristic of the debitage of the Harappan period'. It may be noted that actual flake tools are considerably fewer in number and these are confined to levels of Periods I, II and III. The distributional pattern of lithic tools is significant. By and large, houses have yielded very few of them. Floors of store rooms are usually completely devoid of them. In tombs, interestingly enough, some finished but unused tools have been found, for examble, in several tombs of the upper levels of MR 3 (Period Ic) axes, cores and microliths were located. In a grave of Period VIII some lunates were recorded.

Lechevallier (1984: 50) has concluded her observations on the flint industry of Mehargarh as follows:

> "Period I and II form the first unit, there is a great homogeneity in the blade production. The assemblage is on the whole 'neolithic', with certain epipalaeolithic characteristics like the varied, unstandardized geometric microliths. There are apparently also some variability in the functions of the artefacts, reflecting a partially specialized society. Period III has its own characteristics: the disappearance of microliths and the exclusive use of new types (large triangles and obliquely truncated blades), and a large number of retouched flakes such as scrapers, notches and denticulates. Period IV to VII form the third unit. A general feature is the decrease in the importance of the chipped stone industry; the common characteristics are the apparently restricted use of certain types of specific activities, such as microliths as sickle elements and the presence of true arrowheads. These traits correspond to a much more specialized society."

Stone vessels are not well represented, only a fragment of polished stone bowl, from surface, one small bowl, and a fragment of a dish from the excavation are known to date.

Leaf-shaped arrowheads are reported from Periano Ghundai (Stein 1929: 40), Dabar kot (Stein 1929: 58) and Damb Sadaat (Fairservis 1956: Fig. 30 d) also. Parallel sided blades occur at Kile Gul Mohammad (KGM) I-IV (Fairservis 1956: 234) and Anjira I-IV (DeCardi 1965:

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122-125). At KGM I-IV, the blades, scrapers, choppers and cores have been found (Fairservis 1956: 234-236). The material is mainly chert. Nine fragments of alabaster vessels have been found in KGM III and one in KGM IV; a few others came from surface. They belong to small flat-based vessels with outward-sloping sides. Pecked and ground stones also occurred from KGM I to IV.

Damb Sadaat (Fairservis 1956: 237-241) stone artefacts included blades, scrapers, cores and stone balls, and grinding slabs, stone discs, celts and chisels. Twentyone alabaster sherds were found in DS I, II and III and one on the surface. Stone chisels are reported from the middle strata of Periano Ghundai (Stein 1929: 40), and Damb Sadaat III but celts are found only at Damb Sadaat II-III. Grinding stones occur in Damb Sadaat I, II and III levels and KGM II. Damb Sadaat and Anjira (DeCardi 1965: 176) yielded the saddle querns. Alabaster cups and jars have been found in middle and upper strata of Periano Ghundai (Stein 1929: Pl. IX) and DS I-II. Alabaster vessels are rare in Indus Valley.

At Nal (Hargreaves 1929) in southern Baluchistan a variety of stone objects have been located. They included grinding stones, celts, containers, stone weights and marble ringstones. At Kulli and Mehi the grinding stones and rollers have been found (Fairservis 1971 : 205-208). At Balakot I (Dales 1979 : 252-254) chipped stone objects were made out of chert and flint. About 65 per cent are the edge tools with microscopic polish on the blade edges. Balakotians's strong preference for ventral retouch is unique.

In Sind (Majumdar 1934:120-121, 127, 139) the flint industries associated with Amrian Ware have been located at Bandhni, Tharro Hill, Hothiano, Maliri and Jherrucka (Mughal 1970: 142) and Rohri (Mughal 1970 : 142) and Kot Diji (Mughal 1970 : 142). The characteristic forms of the Tharro Hill flint industry include short trapezoidal blades, small points, backed blades and polyhedrel cores. Apparently, a late microlithic industry is represented here.

At Amri IA long flint blades and stone balls have been found. Stone blades marked by scraped edges are formed at Amri IA and IC (Casal 1964: Fig. 115 nos. 5 & 10 a). Scrapers are rare and occur only at Amri IA—IB (Casal 1964: Fig. 15 nos. 2, 18). A stone borer or awl is the only example reported at Amri (Casal 1964: Fig. 115 no. 17). Stone querns with mullers and pestles occur at Amri. One stone vase occurred at Amri II B (Casal 1964: Fig. 116 no. 21). Leaf-shaped arrowheads are reported at Amri and Pandi Wahi (Majumdar 1934: 93, 114).

Kot Diji (Khan 1965: 38) has an extensive flint workshop and produced a number of stone objects thin, long and sharp knife blades, cores, scrapers, fine micro-blades, chert blades—notched and serrated leaf-shaped arrowhead, grinding stones and mills, pestles, polished balls and sling balls.

In the Gomel plains, Gumla I (Dani 1970-71: 92-98) has produced stone tools like saddle querns, rubbing stones, stone balls, pestles and microliths, like parallel sided blades, awls, scrapers, burins, tranchet occurred only rarely. Gumla II (Dani 1970-71: 92-99) yielded different varieties of round stones, a stone pestle, a broken saddle quern, one flat stone used as anvil-base, a stone pounder, a flesh rubber and microliths of black and pale chert and flint. A new type of long thin blade is added here. In Gumla III the objects of Period II continued. However, a unique find of sharpner stone is noticed. Microliths of chert and flint parallel sided blades and scrapers were also noticed in large numbers.

Sarai Khola I (PA 1968: 35; Halim 1972: 4-13) yielded stone celts with sharp and polished cutting edge, long parallel sided thin flint blades, microliths and one chisel. In Sarai Khola II (PA 1968: 36; Halim 1972 : 4-13) these stone tools continued. Chisel increased. Sling balls,

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pounders, cores, micro-blades, long flint blades, scrapers and mace-heads are the new additions.

Rehman Dheri (Farid Khan 1979 : 375-403) also yielded a variety of tools, such as the lunates, leaf-shaped arrowheads, saws, scrapers, burins, blades, axes and parallel sided blades. Bead-drills are also found. One such drill was found intact in a half-finished carnelian bead. A number of stone implements have been gathered from the surface of Lewan (Durrani 1981: 133-134). They included axes, hammer stone, grinders, lunates, leaf-shaped arrowheads, points, burins, scrapers, bead-drills, blades, etc.

Jalilpur I-II yielded long parallel side chert blades. Pestles, saddle querns and leaf-shaped arrowheads, on the other hand, have been found only in Period II (Mughal 1972:117-124; Mughal 1974: 110, 112).

Kalibangan I (Lal 1979 : 69 ; Thapar 1975 : 21) yielded the saddle querns, mullers and pestles as well as small-sized blades of agate and chalcedony. Banawali I (Bisht & Asthana 1979: 225) has also yielded stone implements although their details are not yet given. Manda I (Joshi & Madhu Bala 1982) has yielded small chert blades, saddle querns and pestles. Milling stones have been reported from Siswal (surface) and Mitathal I. A sandstone ball and a stone flesh-rubber have been found in the excavated levels of Mitathal I. Mitathal II A yielded hammer stones, balls, grinding stones, and a cubical weight on surface.

The lithic artefactual assemblage shows, by and large, late Mesolithic and early Neolithic outfit. Grinding stones, pestles, saddle querns were common to almost all the sites. Parallel sided blades were common to all sites while the leaf-shaped arrowheads were found in northern Baluchistan and Upper Indus region only. On the whole, northern Baluchistan and upper Indus throw more light on lithic artefacts than the lower Indus or southern Baluchistan.

It is also significant to note that at a few sites, such as Allahadino, near Karachi in Sind, microlithic industry continued in full-fledged manner in the mature Harappan context.

Beads of semi-precious stones were very popular in ancient time. Beads of lapis lazuli are widely distributed though in a limited number at Mehargarh I-VII (Jarrige & Meadow 1980), Mundigak II-IV (Casal 1961), Kareze (Fairservis 1956 : 230) in northern Baluchistan; *Fig. 3.16* in southern Baluchistan at Nal (Hargreaves 1929: 34), Sarai Khola II (PA 1968: 36; Halim 1972 : 15), Jalilpur II (Mughal 1974: 112), Banawali I (Bisht 1977), Rehman Dheri (Durrani 1977 : 3), Balakot I (Dales 1979), Mehi (Stein 1931: 123), Kulli (Fairservis 1971: 208), Amri (Casal 1964 : 154) and Pandiwahi (Majumdar 1934 : 13). Beads of carnelian are found at Jalilpur II (Mughal 1974 : 112), Nal (Hargreaves 1929 : 34) KLB I (Thapar 1975 : 21), Rehman Dehri (Durrani 1977: 3), Sarai Khola II (PA 1968: 36) and Mundigak (Casal 1961). Beads of agate are reported from Jalilpur II (Mughal 1974 : 112), Sarai Khola II (PA 1968: 36; Halim 1972 : 15), Rehman Dheri (Durrani 1977 : 3), Kalibangan I (Thapar 1975 : 21), Mitathal IIA, Kulli and Nal (Hargreaves 1929). Steatite beads are found at Mundigak, Pandiwahi, Ghazi Shah and Kalibangan (Thapar 1975 : 21), Kile Gul Mohammad (Fairservis 1956 : 230) and Karez site and Mehargarh. Turquoise is found in the forms of bead from Mehargarh I-VII (Jarrige & Lechevallier1979 ; Jarrige & Meadow 1980), Rehman Dheri (Durrani 1977 : 3; 1981 : 136) and Mundigak. Chalcedony at KLB I (Thapar 1975 : 21) and Jasper in Gumla III (Dani 1970-71: 86) are found used for beads. Other semi-precious stones were also worked for beads, etc., but only in a limited quantity.

Another type of object, very popular in the Middle East, has been steatite/chlorite vases *Fig. 3·19* (Durrani 1964 : 51-96). Mehi has produced a few fragmentary compartmented stone vessels. They are neatly worked bowls with geometric designs incised carved from a fine grained grey stone.

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## ARCHITECTURE

There is a remarkable uniformity in the material and method of constructing structures throughout northern Baluchistan from the Seventh millennium B.C. to 2500 B.C. Mud-brick walls, supported on boulder foundations, occur at upper and middle strata of Periano Ghundai (Stein 1929 : 36-41), Sur Jangal (Stein 1929 : 73), Moghul Ghundai (Stein 1929:44), Rana Ghundai (Ross 1946 : 293), Damb Sadaat (Fairservis 1956 : 206-216), Kechi Beg (Fairservis 1956 : 222) and Anjira (DeCardi 1965 : 101-103). Excavations at Mehargarh illuminate the architectural pattern of northern Baluchistan through the ages (Jarrige & Lechevallier 1979 : 463-535).

### NORTHERN BALUCHISTAN

The settlement of Mehargarh I (Jarrige & Meadow 1980 : 422) consisted of mud-brick structures with multi-roomed, rectangular units separated from one another by open spaces that held numerous human burials. Some of the structures were divided into small square compartments apparently used for storage. The mud bricks, usually, measure 33 × 14.5 × 7 cm and 28 × 14.5 × 7 cm. These bricks bear finger impressions. The most interesting feature of this level is the discovery of three circular ovens lined with moulded, fired bricks which has left at the bottom a 50 cm thick deposit of charcoal and ashes mixed with fragments of the collapsed cupola and two circular hearths (Jarrige and Lechevallier 1979 : 468-469). *Fig. 2.6A*

In Mehargarh II-III (Jarrige & Meadow 1980 : 128), several rectangular structures were uncovered. They are subdivided into narrow, doorless compartments. The imprints of wheat and barley and two sickles in the fill of the compartments suggest that, at least, some of these served as store-rooms for cereals. *Fig. 2.11 & 11A* **Pl. 7** *Fig. 2.11B*

In Period III of Mehargarh, a flooring of large boulders and river pebbles has been uncovered (Jarrige and Lechevallier 1979 : 480). This stone-paving was common to other sites also, for example, at Periano Ghundai and Anjira (DeCardi 1965 : 103).

In period IV (Jarrige and Lechevallier 1979 : 488) of the same site, the full plan of a house has been uncovered. Three rooms are backed by a huge mud-brick wall. This wall, which is 2.60 m wide, must have been used as a platform or terrace. Out of the three fairly good-sized rooms, two are connected by a door, the wooden lintel traces of which are still preserved. The height of this door is about 1.10 m which was also the size of doors found in later architecture at Mundigak. The floor of the front-room was covered with stone objects. To the east of the house, a kitchen area, filled with ashes, burnt pebbles, bones and potsherds has been exposed between small walls, indicating outdoor domestic activity. In the same area, another building is partially exposed. *Fig. 2.18*

The remarkable feature of the architecture, in this phase, is its sturdiness, the walls built with moulded bricks are usually very thick. Another important feature is a sort of roof covering a corridor and a small room. The wooden beams are regularly disposed, parallel to each other and supported in the small room by a transversal main beam (Jarrige and Lechevallier 1979 : 489-490).

In the Period VI levels (Jarrige and Lechevallier 1979 : 502), just below the surface in the south-eastern part of the mound, several buildings have been uncovered. These structures are greatly eroded. However, the plan shows a set of rooms, sometimes with niches, lanes running between ; courtyards with fire-places paved with pebbles ; store-rooms and storage jars *in situ* all were discovered.

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*Fig. 2.22*

In Period VII, a monumental structure was found in the south-western part of the mound where a huge mud-brick platform was partially exposed (Jarrige and Lechevallier 1979: 509-10). On the northern side of the platform is a platform on this side the height of which is 3 to 4 layers of bricks. The floors of the rooms or the yards were covered with a lot of potsherds. Several small rooms, belonging to Period VII (Jarrige & Meadow 1980 : 133) were uncovered in the upper part of the mound. The general plan is rather intricate and, in most cases, only the base of wall is preserved. A number of rooms were two-storey high, the ground-floor being low rooms, used for storage, with a ceiling only a metre above the ground level. The ceiling beams of wood and parallel rows of joints supported the floor of the upper room where storage jars often stood. In one of the low ground-floor rooms, some 200 pots had been found stored, for redistribution perhaps.

*Fig. 3.12*

In this last phase, other contemporary sites revealed further architectural growth. On DS III (Fairservis 1956 : 217) and at Siah Damb formal structures are seen : a podium, associated in each case with drains. Another large drain, 15.85 m long and made of mud and burnt bricks, is attested at Dabar kot (Stein 1929 : 59-60). Burnt bricks were only used at Dabar kot. At Periano Ghundai (Stein 1929 : 38) a room, of the partially excavated building, measured 462.8 × 274.3 cm in the middle strata. Another room of the Upper Strata measures 182.9 cm square. In Anjira IV, a rectangular room measures 304.8 × 60.96 cm (DeCardi 1965 : 102). The thickness of mud-brick walls both at Periano-Ghundai and Moghul Ghundai in the Zhob Valley measured 60.96 cm while at the former site 76.20 cm thick walls are also recorded (Stein 1929 : 38, 44).

The method of constructing mud-brick walls by alternating courses of headers and stretchers—the so called 'English bond' is known in the 'Late Quetta' level (III) at Damb Sadaat (Fairservis 1956 : 214).

The excavations at Mehargarh have yielded various industrial complexes from the very beginning. We are not sure whether the granaries were public buildings or not. In Period II at Mehargarh (Jarrige & Meadow 1980 : 130) against the south wall of one of the sub-divided structures, a workshop was uncovered where beads were manufactured out of soapstone. The implements along with beads in various stages of manufacture have been found. Shell beads were also prepared here.

Open spaces were used for pottery production. In Period VI (Mehargarh) (Jarrige & Meadow 1980 : 132-133), the bases of circular kilns built one above another were found in thick layers of ashes filled with deposits of millions of potsherds. Such bases of kilns paved with burnt pebbles have also been found. These kilns were temporary structures which were used only once and then rebuilt.

No defensive wall has been found in northern Baluchistan so far.

## SOUTHERN BALUCHISTAN

In Southern Baluchistan, unfortunately, there is not a single site which has been excavated on a large scale. A few Kulli sites like Niai Bhuthi and Nindowari (Casal 1966 : 10-21) have been dug systematically and extensively. No Nal site has been excavated so far. On the basis of the material available, pre-Harappan architecture in southern Baluchistan was as follows : the normal building material used was stone, ranging from rough rubble masonry with mud mortar to the carefully squared shale and sandstone ashlar blocks, arranged in decorative courses. Adasta Jamb, another Kulli site, also yielded similar use of stone work.

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The use of mud-bricks was in addition to stone at Mehi, while a wall of the latest occupation-level at Shahi-tump yielded a stone foundation and an upper structure of mud bricks (48.3 × 25.4 × 7.6 cm). At Mehi, stone walls, the use of mud-bricks, and a hearth are attested.

At Kulli (Piggott 1950 : 98) a flagged paving was encountered at one point, and the indications of a wooden flooring over a cellar at another. Stone walls were sometimes internally applied with white plaster. The house-plan could not be determined due to scanty information from limited excavations conducted in non-scientific fashion. At Kulli, rooms ranging from 3.65 × 2.44 m and 2.44 × 1.83 m were found and the same type of windowless, doorless cellars, as at Nundara, occurred. The building may have been a part of a simple or paleo-complex. The lower steps or a stone stairway at Kulli suggest that there was an access to a flat roof or to an upper storey.

The Kulli sites of the Las Bela region, categorized in Complex A by Fairservis (1971 : 195-202) also show the structures limited to the south and east position of the site. Here the familiar large heaps of boulders within which are traces of walls have been found. Around the two principal mounds, numerous incomplete wall-lines are the remains of a variety of rectangular and square buildings. One mound has several wall-lines suggesting a squat pyramidal form with a flat top.

Excavations at Nindowari, another Kulli site, excavated by Casal (1966 : 10-21) has brought to light the remains of a complex monumental stone structure which may probably turn the Nindowari settlement into being a religious centre. It shows the architectural lay-out, the plan of the central monument as a stepped structure with stair-cases giving access to the top, and the methodical arrangement of important buildings all around on the same quadrangular platform. The possibility of a central tower is also suggested, though its exhaustive plan is not recorded. Many changes and enlargements were made in the course of time. Could this have been a centre for pilgrimage ? In Meso-America, in the remote past, such pilgrimage centres with pyramidal-shaped, stone structures were very common but, admittedly, the two situations are different. In Baluchistan, this structure is unique—a fact which may not admit the suggestion.

*Fig. 3.21*

**Pl. 16**

At Nal, Hargreaves (1929) uncovered a series of fourteen rooms which were outlined by stone walls that had apparently provided the foundations for mud-brick houses. The houses give the impression of being well laid out and less haphazard in plan. Hargreaves was unable to identify any door in these walls, but hearths were found in the rooms.

No defensive wall in southern Baluchistan before the advent of the Harappans, has been recorded.

At Balakot I (Dales 1979 : 250) (Nal-Amri settlement) mud-bricks (10 × 20 × 40 cm) were used for walls and pavings. Some pavings are like small solid brick-platform. At Nundara, Kargushki-damb and Rodkan in Baluchistan coursed stone slabs set in mud mortar were employed for the walls of houses at least up to window height and at the latter site, large blocks alternated with triple courses of small flat stones.

This brief survey of pre-Harappan architecture in Southern Baluchistan clearly shows that, while modest domestic architecture used mud-bricks and stone-foundation, some monumental structures of doubtful use were barely different.

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**Defences**

No trace of defensive walls has been recorded at Amri in levels IA-ID but in Period IIB (Casal 1964 : 7, Fig. 26), lying immediately below the mature Harappan occupation, an L-shaped mud-brick structure over stone foundation exists. It shows considerable wall-thickness, ranging between 60 centimetres and 1.20 metres. This is considered as remains of rampart. A series of rooms, one of which, measuring 4.0 × 1.7 m have been found at the back of the rampart while the front face has square or rectangular projections. We are not aware of the exact purpose of these rooms. Another Amrian site Kohtras Bhuthi (Majumdar 1934 : 132-134) in Sind, located on a hill spur, has a double defensive wall. Four bastions form part and parcel of structure. Inside the fortified area, the remains of stone-built structures with countless rooms were reported. Natural hillock has been used for its construction. Another similar type of fortification can be seen on the Sind side of the Tharro, and also at Pokran (Majumdar 1934 : 125), in the same region. At Pokran, a huge rampart wall of undressed stones, measuring 6.40 m in width is noticed. It extends from a large settlement site to the nearby hill. It is not clear whether it was built as a defensive wall or not. A Dhillanijo-Kot in Sind there are traces of a defensive wall.

At Kot Diji (Khan 1965 : 29) also, the defensive wall was built on the hilly slopes overlooking the Indus plains. Raised directly on bed-rock, the lower part of the wall was built with undressed limestone and the upper portion was made of mud-bricks. At places, the wall survives up to 3.65 to 4.62 m in hight. At the base, the width normally measured 3.48 m but at the corners with square bastions, the total width ranged between 4.57 m to 6.09 m. At least one bastion measures 9.45 m in length and 6.09 m in width. The fortification was constantly used throughout the occupation of Kot Diji, but was abandoned by the Harappans.

At Rehman Dheri (Durrani 1981 : 135), in the Gomal plains, the fortification wall, built of dressed mud slabs, has been noted.

East of the Indus, Kalibangan (Thapar 1975 : 20), in the Ghaggar plains, was also a fortified town during Period I. The defence wall, built of mud-bricks (76.2 × 50.8 × 25.4 m) form a rough parallelogram. It covered an area of 250 m from north to south and 180 m from east to west. During its long use, the defence wall was repaired extensively at least once. In so doing, the thickness of the wall, originally 1.90 m, was enlarged 3.70 to 4.10 m.

Baawali (Bisht & Asthana 1979 : 225) also appears to have been surrounded by a wall during this period but this has still not been confirmed. Similarly, at Harappa, the existence of a defensive wall in the Pre-Harappan level is doubtful. Wheeler (1947 : 91) takes it to belong to the Mature Harappan while Mughal (1970 : 127-128) relates it with the Pre-Harappan horizan (evidence of layer 26A). He further observes that the use of the term 'Pre-defence' is avoided because at least one layer, which produced Kot Dijian pottery, is actually associated with the defence wall.

**Domestic architecture**

Stone was used for building at least the foundation courses of walls at most sites : the upper parts of the walls were made of mud-brick or piśe. In the Sind states (Piggott 1959:78) of Pandi Wahi and Ghazi Shah, abundant occupation debris was reported but surprisingly, no trace of building was noticed. It may be assumed that piśe mud-walls were used exclusively and that they disintegrated in time.

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At Kotras Bhuthi Majumdar (1934) uncovered a number of rooms, large and small, inside the defensive wall system. At least one structure was interpreted by Majumdar as bath which had occupied the corner of one room by the entrance. In the same house, the remains of a stairway, implying access to the flat-roof or an upper-storey, were found.

At Amri (Casal 1964) mud-brick walls were built on stone foundation. No complete house-plan is available, however the size of rooms give some idea of the general size of the houses. The most striking aspect of Amrian domestic architecture is the regularity of planning and orientation throughout the Amrian Period, and on both mounds, A and B. The houses seem to have consisted of one or two rooms with small subsidiary rooms located in an outside corner. One fully explored room in IB measures 5 × 3.50 m. The width of the walls varied even in the same structural level. Occasionally, mud platforms were found in rooms near a wall to accommodate storage jars. There is no evidence of ovens within the residential area. At the height of the Amrian Period (IC-ID), the houses were close to each other. In Amri IC to IIB, the mud-brick walls were built on very high foundations.

The plan of the houses consisted of doorless chambers, usually six in number, with no habitational remains. One structure measures 4×3.50 m internally with almost square rooms, each 1.25×1.10 m, with 25-50 cm thick mud-brick walls.

Intensive occupation is reflected by four structural levels in Period IC on Mound A and three phases on Mound B. At the latter mound, the use of a multi-chambered base for houses, for living above ground-level, continued along with mud-brick houses built on stone foundation at the ground level. The usual plan consisted of one to three rooms with a large courtyard enclosed by a wall. One house covers an overall area of 6.50×10 m. The existence of post-holes in the walls may suggest wattle and daub construction.

In the residential area, the floors were made of mud and the walls were plastered. No clear evidence of drains has been found. In Period IIA, the fragmentary structures indicate that compartmented building remained in use along with normal houses on stone foundation.

On other Amrian sites, stone structures are reported at Bandhni, Chauro, Damb Bhuthi, Ghazi Shah, Gorandi, Lohri and Pokhran (Piggott 1950 : 76-80).

At Kot Diji (Khan 1965 : 17-20), seven structural levels of the Pre-Harappan have been located on the high citadel mound. Mud-brick walls on stone foundation were recorded throughout. A few walls measured 1.52 m thick. The average size of bricks used is 38.1 cm × 19.05 cm × 9.16 cm. No full plan of a house is available either on the citadel or in the lower city. There is however some indication of narrow streets and small-sized stone structures. On the occupational floors, Khan recorded brick-lined community ovens (Khan 1965 : 25). A kiln with a lined funnel is reported from Kot Diji. Mud-brick floors were also noted. **Pl. 18**

In the Gomal plains the recently discovered site of Rehman Dheri (Durrani 1981 : 135) yielded structures which consisted of mud platforms and mud-brick houses of square or rectangular shapes. Round pits with mud walls containing grains are also reported from this site. A large number of round furnaces were exposed in area B. The main street exposed in Area C of Rehman Dheri was about 10.66 m wide. The site of Lewan (Durrani 1981 : 134-135), near Rehman Dheri, is marked by several pits in round, rectangular and irregular shapes which are full of broken pottery, ash, charcoal, animal bones and garbage. Some pits, however, had large tubs, or basin-like storage jars. One pit also yielded a seal impression. The site seems to be an industrial complex. Another important Pre-Harappan site of the Gomal plains is Gumla (Dani 1970-71 : 41) which has yielded large-sized community ovens—pit-circles full of ash and charcoal bits—made for cooking and roasting (Period I, Pre-Pottery Neolithic phase); Period

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II of Gumla (Dani 1970-71 : 44) (Kot Dijian occupation) has yielded mud-brick houses in sub-periods b & c. The size of the mud-bricks is approximately 28 × 12.5 × 7 cm ; floors belong to the mud-brick walls.

Sarai Khola II (*PA* 1968 : 35-36) has revealed very scanty structural remains. Floors are made of rammed mud. The existence of huts is evidenced by a number of post-holes filled with *kankar* and gritting material. Fire-places are also recorded.

No substantial structural remains have been found in Jalilpur I (Mughal 1972: 117-119 ; 1974: 110). However, the use of mud-bricks and the use of mud-floors are attested in Jalilpur I (Late Neolithic phase). In Jalilpur II, two structures of mud-bricks and mud lumps have been reported. A pottery kiln is also found at Jalilpur II.

Kalibangan (Thapar 1975:20), the best known of sites east of the Indus, witnessed the extensive use of mud-bricks in domestic architecture. Mud-bricks of standard sizes were
**Pl. 21** used for defence-were walls. But mud-brick houses also have been reported from KLB-I. The walls were styled with headers and stretchers in alternate courses, known as the English bond, a main characteristic of the mature Harappan masonary. The walls were plastered with mud and chaff. Houses consisted of a courtyard and a few rooms along its margin. A number of ovens, underground and above ground, have been found in the courtyard. They are similar to the modern tandoors of Punjab and Haryana. Several deep and wide cylinderical pits, lined with lime plaster, are noticed, which possibly served as bins. The kiln-burnt bricks have been used in drains only. A wide street is suspected near the entrance, at the northern side of the wall. However, due to superimposed Harappan deposit, excavations were impossible, hence no lay-out of streets was possible to determine. In the south-eastern part, a lane, 15 m wide, was identified.

Banawali (Bisht & Asthana 1979:225) is another site, excavated horizontally, which has yielded houses, made of moulded mud-bricks, in straight rows in Period I (Kot Dijian). Usually a house consisted of a circular or oval hearth or oven in one of the rear rooms. A dug out in the form of a circular pit to store grains has also been recorded. Sun-dried bricks and kiln-baked bricks were both used at Banawali. The brick sizes were similar to KLB-I brick sizes. Furnaces above ground in oval structural form, built with mixed clay, with long axis of about 1 to 1.3 m, have been reported from Bara. Mitathal I has yielded a few mud-bricks, of 30×20×10 cm size. In the same level, a few mud-lined pits also occurred. In Mitathal II A, several mud-brick structures, with about one metre wide walls, are found. The brick sizes are 40×20×10 cm and 36×18×9 cm.

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# MOBILITY OF PEOPLE, CULTURE INTERACTION, AND THE PROCESS UNDERLYING CULTURAL UNIFORMITY IN PRE-HARAPPAN TIMES

4

From time immemorial, the questing ambition has moved man from region to region, and cross rivers and mountains to reach distant lands. History has yet to reveal a period in which human migrations and cultural interaction did not take place. During the Neolithic period, when 'self-sufficient' settlements existed we find people moving intensively at least within a radius of 50 km. This area covered about four to five villages which shared their produce, making them 'self-sufficient'. In course of time, this area extended from 50 km to 100 km radius due to population pressure and the availability of richer natural resources in neighbouring regions. The settlements within this hundred km radius usually formed a single culture zone where similar cultural traits, with some regional variations, occurred. This is known as intensive and regional interactions. Even to this day in India, it is possible to visualize similar situations of intensive and regional interactions in several areas. The long distance mobility has, in fact, increased these kinds of interaction all over the world.

The second type of interaction is economic. marginal and inter-regional trade. This had grown with time. From the very beginning, it involved luxury goods of long distance origin—which, from source to consumer, change a number of hands. Though this type of interaction is mostly limited to the commercial transactions, yet marginal cultural traits are also involved.

The third type of interaction takes place when, due to certain reasons, as population pressure, natural calamities, etc. Groups of people move out from their homeland, in search of new lands and they settle down at places with pre-existing local cultures. The migrant and the local cultural traits flourish side by side. And so one finds two types of totally different cultures at one place and at one time. This does not mean any colonization of the area. However, a contact situation develops. For example, after partition the Hindus, especially the Punjabis, left their homeland in Pakistan and moved into India dispersing all over the country. Their greatest concentration has been in Delhi. They flourish here, co-existing with the local culture. This interaction is an accident of history.

These three types of interaction may now be applied to the remote past of Baluchistan and the Greater Indus Valley. The archaeological material in this area has to be visualized within this frame-work. By now, a number of models have been applied to reconstruct the past-as-it-was in this region: culture-creep model, stimulus/bow model, adoption model, etc. Shaffer (1978A: 99-113) has summarised all of them in his book 'Prehistoric Baluchistan'. The theory of diffusion was favoured by scholars for a very long time. Now a new trend is emerging in which emphasis on economic interaction is primary: commodities were exchanged, and traded

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over a long distance—like lapis lazuli and turquoise in the pre-Harappan context. As a result of this primary interaction, pottery, pottery motifs, and shapes and other similar cultural traits, found their way to alien lands, and in the process formed a secondary interaction zone.

The commercial activities of the Mesopotamians are not only found in archaeological material but also in a large body of literary sources. Even the Harappans have left traces of their commercial activities (Asthana 1979A: 31-43). Typical Harappan findings outside the Harappan culture-zone throw significant light on their long distance trade, e.g., seals, ivory objects and etched carnelian beads in Mesopotamia and Iran (Kirman); pottery, seals and terracotta objects in northern Afghanistan and southern Turkmenia. Except for a few alien stray findings, there is really not much in the Harappan cultural milieu which could be quoted as evidence of the Harappan import. By and large, the existence of a dockyard and a ware house at Lothal (Rao 1973), sea ports along the Makran coast at Sutkagendor, Sotka Koh (Dales 1962 A-B), etc., a trading port at Shortugai (Francfort 1978), bead-making industry (for etched carnelian beads) at Chanhu-daro and Lothal and corresponding Mesopotamian literary records give us a coherent picture.

Archaeologically, our worst moments occur when we have to deal with the Baluchi chalcolithic folks or the Pre-Harappans in the Greater Indus Valley since evidence regarding trade with distant lands in their context is very meager. Baluchi or Pre-Harappan products do not occur in neighbouring regions nor are any alien elements found therein. However, in such circumstances, the cultural zone is formed by people interacting amongst themselves.

**Intensive and Regional Interaction**

In point of time, intensive and regional interaction is demonstrated through items used in everyday life: pottery, terracotta figurines and stones artefacts first in northern Baluchistan. Then we find it in southern Baluchistan. Next, in Sind, Punjab, Rajasthan, and finally in Haryana. All these areas formed separate cultural zones during different protohistoric periods but they shared a number of common items in per-Harappan times.

Mehargarh (Jarrige & Lechevallier 1979: 463-534) has yielded a long chronological sequence for the cultures of northern Baluchistan right from Pre-Ceramic Neolithic to the Pre-Harappan Chalcolithic culture. Of the Pre-Ceramic period only two settlements have so far been found in northern Baluchistan, and one more in the Gomal plains. The available evidence is fragmentary, and thus quite limited—perhaps due only to vertical digging at the sites. However, we presume that the Mehargarhians would not have survived in complete isolation—at least a few settlements must have co-existed in surrounding areas and there was close interaction amongst them. It is witnessed by the extensive remains at Mehargarh.

*Fig. 2.5*

*Fig. 2.5*

The Ceramic Neolithic Phase shows wide interaction as evidenced by the Kile Gul Mohammad black-on-red ware in southern Afghanistan, the Quetta-Bolan region, the Zhob and Loralai valleys and in the Kalat area. The common practice for domesticating certain animals and plants, and the use of similar lithic artefacts also suggest the intensity of this interaction.

*Fig. 2.13*

During the following Chalcolithic periods, regional interaction increased on a wider scale as reflected in the spread of ceramic styles—KGM Black-on-red wares, Kechi Beg Bichrome and Polychrome wares, Togau A-D pottery—throughout northern Baluchistan and southern Afghanistan. The zoomorphic motifs (caprids and ibex) and geometric patterns of triangles, stars, etc., on the pottery of this phase (present at Mehargarh III) connect it with Hissar IB-IC, Sialk III and Namazga II. However, these sites are far off in location and cannot be included in the regional interaction zone. This point will be taken up a little later.

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A number of cultural complexes of northern Baluchistan characterize the settlements in southern Baluchistan. Probably, some so-far-unknown natural calamities forced out the northern Baluchis from their settlements to neighbouring areas in the south. Though the intermingling of various regional ceramic traditions of northern Baluchistan made them totally different in form in south Baluchistan at a later stage, yet the original impulses undoubtedly arrived from northern Baluchistan in their original form.

So far, it may be pointed out, we have not been able to trace the roots of autochthonous development of early cultures in south Baluchistan, if they were at all there. One more fact is that the southern Baluchi cultures, being slightly later in date, developed more by interacting with the local Pre-Harappan and Harappan cultures than by remaining transplanted north Baluchi cultures. This is clearly borne out by the fact that the Nal and Amri wares are widely distributed down to Kalat, and found intermingled at several places in Sind and Las Bela. A few examples of intermingling could be seen even in the north, as far as Mundigak and Mehargarh. As Kulli was slightly later in date than Amri and Nal, her area of interaction was widespread from south-east Baluchistan to the area of Bampur complex and Oman, Persian Gulf, Umm-an-Nar, etc. It may, however, be mentioned that this is not the same as Dales (Dales and Louis 1969: 16) put it—to view the Kullis as the middlemen of east-west trade needs more solid evidence than what is available at present. The pots and the decorations on them, as found in the Persian Gulf, have only a resemblance to Kulli, none of them is identical, e.g. the bulls are there but not the Kulli landscape.

In northern Baluchistan this regional interaction is witnessed throughout the period. During the Early Bronze Age when the Kechi Beg Polychrome Ware was dying out, Quetta Ware appeared in the region in a big way. Significantly, the Kechi Beg Polychrome Ware was replaced by local wares, mainly by Faiz Mohammad Grey Ware. This was, in addition, a deluxe ware and, therefore, popular not only in its own cultural zone but also outside it. Interestingly enough, several vegetal and faunal motifs were introduced in painted decoration, such as the fish scale motif, the *pipal* leaf motif, the fish, the bull, etc. These items rapidly became popular. Further, the terracotta figurines of the Zhob mother goddess in the north and terracotta figurines of Kulli girls in the south are testaments to the intensive interaction.

Later on, when the Pre-Harappan settlements emerged in the Indus system and beyond, the Kot Dijian elements were shared amongst them and spread over a wide area, although regional variations remained as pronounced as ever. This area included northern Baluchistan, the Gomal plain, the Potwar region, Punjab, Sind, Haryana and Rajasthan. It covers an area of over 1600 km NS-EW. The first impulse started from northern Baluchistan, particularly from the Zhob and Loralai valleys. Somehow it did not reach far south Baluchistan and Gujarat. *Fig. 2.19*

Thus, three prominant regional interaction zones can be clearly seen before the advent of the Harappans: northern Baluchistan, southern Baluchistan and the Greater Indus Valley.

**Marginal and inter-regional Interaction**

The second type of interaction is marginal and inter-regional, motivated by economic pursuits: the discovery of just a few precious Pre-Harappan Baluchi products in distant lands and items of foreign origin (Iranian and south Turkmenian) in Baluchi-Pre-Harappan milieu proves it. These items fall in the category of luxury goods. This limited economic interaction leads to a

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culture-contact situation of marginal influence.

The luxury items traced during this period included lapis lazuli, turquoise, shell, steatite vases, carnelian, copper and Faiz Mohammad Grey Ware pots.

*Lapis lazuli*: Lapis lazuli is widely distributed in the archaeological remains of Baluchistan and Greater Indus Valley but generally in limited quantity (Chakrabarti 1978:51-58). Mehargarh has yielded lapis beads from Pre-Ceramic Neolithic levels to Pre-Harappan Chalcolithic levels. In Period III, Chalcolithic levels of Mehargarh, we have ample evidence of lapis working. At Mundigak II and Shahr-i Sokhta II, we have the lapis workshops. In southern Baluchistan, this precious stone is present almost on all Nal, Kulli-Mehi and Amri settlements. Gumla II-III, Jalilpur II, Sarai Khola II, Kalibangan I, Banawali I, etc., which belong to the Pre-Harappan times, have yielded lapis lazuli. Sites located west to the Indus have generally produced more lapis than the sites situated east of the Indus although, at Jalilpur, a substantial quantity has been found. As lapis lazuli has only one major source at Badakshan in northern Afghanistan, the issue of Afghan-Indus lapis trade is not controversial, although our ideas on trade mechanism may differ.

*Turquoise* : Like lapis lazuli, turquoise was an important luxury item in the Old World although, in South Asia, objects such as beads, made of this item, are fewer than those of lapis. Turquoise has been found in southern Afghanistan, northern Baluchistan, southern Baluchistan and several regions of the Indus Valley. Turquoise also occurred in all levels at Mundigak. We have workshops for turquoise at Mehargarh and Shahr-i Sokhta. As turquoise has more than one source, it is difficult to ascertain which source was exploited in the past. However, mines in northern Iran and southern Turkmenia are the nearest possible sources (Pogue 1915: 40; Tosi 1974: 147-162).

These two semi-precious stones have placed Baluchistan and the Greater Indus Valley in the long-distance commercial zone. This could not have happened only during the Bronze Age although it is difficult to visualize the *modus operandi* of long distance trade in the pre-urban setting. Did the Baluchis go all the way to collect the stone? It seems unlikely. Shaffer's (1974) views on the role that the nomads may have played in the exchange of goods in these areas seem plausible. Even to this day, one comes across nomads from this region sometimes with prized commodities. These commodities change several hands till they finally reach the consumer.

These two semi-precious stones brought northern Iran-south Turkmenia, Baluchistan and the Indus system into an area of mutual exchange. As a by-product of this situation, one gets similar faunal motifs (caprids, ibexes, etc.) on the pottery from Hissar IB and IC, Sialk III, Namazga II, Mehargarh III, DS II, Rana Ghundai, etc. At the same time, one should note that it was a case of diffusion and not imitation of style and motif throughout this cultural interaction zone. However as the Hissar IB-IC, Namazga II, Sialk III, Mehargarh III, KGM III all are in the same chronological horizon, it is very difficult to locate the original home of these styles. Still, regional variations in the stylized representations of caprids, which later on turned into geometric forms, confirm the thesis that these faunal motifs were not brought to Baluchistan from outside. In fact, their depiction on the wheel made pottery of Period II of Mehargarh confirms their local Baluchi origin. The real imports in Baluchistan were two chalices of grey ware discovered in Mehargarh VII since these were alien and different from the Faiz Mohammad Painted Ware (Jarrige & Lechevallier 1979: 517-519). They were certainly imported from northern Iran, perhaps from Tepe Hissar or Shah Tepe, where their parallels abound.

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Compartmented seals, double spiral-headed pins and Quetta Ware are also sometimes considered the result of this economic interaction. However, the sudden appearance of these objects in Baluchistan forces us to form a different opinion regarding them. This will be discussed later.

*Shell*: The distribution of shell objects, or shell as a raw material, has now been recognized as a very important item for identifying economic and cultural interaction. Shell bangles, rings, beads and pendants are found widely distributed in archaeological remains all over the Middle East from an early date. Many of the shells, used in the manufacture of these objects, originate from the Indian Ocean or the Persian Gulf. Around 4500 B.C. beads of Indian Ocean species were used at Tal-i-Iblis in Kirman (Caldwell 1967:408). The craftsmanship of the 'pig' and 'snake' pendants found at Tepe Yahya Period VB around 3500 B.C. shows that shell was used as an important medium of art work as far back in time as the fourth, and possibly fifth, millennium B.C.

The use of shell in Baluchistan is attested in the seventh millennium B.C. at Mehargarh. Shell was in use there through all succeeding periods. It is widely distributed and attested at Damb Sadaat II-III, Mundigak, Gumla III, Sarai Khola II, Kot Diji, Jalilpur II, Kalibangan I, Banawali I, Balakot I, Amri IA and Nal.

We do not know the precise role shells played in this economic interection. Still they do show that the Arabian Sea was also involved in this primitive trade.

*Copper*: Copper artefacts, unless of very specific type, are poor indicators of cultural interaction as copper is widely distributed in nature and in archaeological remains of Baluchistan and the Greater Indus Valley. Evidences for metallurgy have been found at Mehargarh III, in crucibles as traces of molten copper, and as copper objects (Jarrige & Meadow 1980: 130). In fact, Mehargarh I, going back to the seventh millennium, has also yielded a copper bead. Copper metallurgy is, however, also evidenced at Tal-i-Iblis in south-eastern Iran as early as the seventh millennium B.C. (Caldwell 1967). But, it is significant to note that Baluchistan does not appear to have been in close contacts with south-eastern Iran in the fourth millennium B.C. Thus, in all probability, metallurgy also developed in Baluchistan independent of Iran.

*Steatite-Chlorite Vases* : One of the other important commodities of the third millennium West Asian trade included steatite and chlorite vases, manufactured in the Kirman region—at Tepe Yahya (Lamberg-Karlovsky 1972B) and Shahdad (Hakimi 1973; Asthana 1984) in particular. These objects are found widely distributed in south-east Iran, Siestan, Mesopotamia, the Persian Gulf, southern Baluchistan and the Indus (Durrani 1964 : 51-96). Many of these vases are, in fact, toilet boxes and were luxury items. In southern Baluchistan the largest number of their remains have been found in the Kulli context. For example, at the Mehi cemetery, fragments of these vases have been noticed. Significantly, no good example of these vases has so far been found in northern Baluchistan. *Fig. 3.19*

*Ceramics* : The Faiz Mohammad Grey Ware, being deluxe pottery, was traded in the past. In Baluchistan and the Greater Indus Valley a number of distinctive ceramics were recorded of which the Quetta Wet Ware, Faiz Mohammad Grey Ware, Kechi Beg Bichrome, KGM Blackon-red, Kulli Ware, Nal and Amri wares were widely distributed. For example, the Quetta Wet Ware has been reported from Siestan (Shahr-i Sokhta) and Persian Baluchistan.

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Faiz Mohammad Grey Ware was apparently popular in south-eastern Iran; it was reported from almost all sites: Tepe Yahya, Shahdad, Bampur, Khurab, Damin and Shahr-i Sokhta. This grey ware is totally different from the Burnished Grey Ware of northern Iran. This is one of those commodities which was exported to south-eastern Iran from northern or southern Baluchistan. The Quetta Wet Ware and the Faiz Mohammad Grey Ware used special technology. Mehargarh V to VII has yielded evidence for the production of these wares at this site and both wares are present here in their primitive stages.

However, wares like Kechi Beg Polychrome, Rana Ghundai black-on-red, Kulli, Nal and Amri were of secondary importance in trade—for, outside their cultural zones their numbers are too few and far between to justify their being trading commodities. The Kechi Beg pottery and KGM black-on-red have been discovered at Shahr-i Sokhta; Nal pots have been found at Shahr-i Sokhta and Tepe Yahya IV C. One sherd of Amri bichrome has been found on the surface of Tepe Yahya, and Anjira Ware with its appliqued snake-head has also been reported from Yahya.

Kulli pottery was also widely distributed and obviously influenced other wares. The Bampur IV-VI pottery has close similarity with Kulli Ware; Persian Gulf sites like Umm-an-Nar, etc., have yielded typical Kulli pottery. Previously, scholars have connected this pottery with the Scarlet Ware of Mesopotamia. But a close examination of Scarlet Ware and Kulli Ware shows that the similarity ends with the decorative friezes of faunal and floral motifs. The style of bulls and trees, the texture of the ware, the colour combination and shapes of the pots made these two so different from each other that one can easily indicate. Also, early Kulli Ware has geometric motifs, the faunal friezes came later. So, if they did copy Scarlet Ware, they only took the style of making friezes. And even here, the Kulli potters Indianized the copy thoroughly. One sherd from Yahya also presents a Kulli bull motif although the ware is totally different from Kulli Ware (Personal observation). As the Kullis were partially contemporaries of the Harappans and they were part of their integral trade network, they left these remains in their working areas of the sea coast and Persian Baluchistan. Northern Baluchistan has not yet yielded Kulli remains. However, one potsherd from Mehargarh VII has Kulli look.

The economic pursuit has had a few other off-shoots with terracotta cakes, so typical of the Mature Harappan phase, being found at both Shahr-i Sokhta and Tepe Yahya. The transfer of technical knowledge is another off-shoot exampled by the drilling of beads with jasper bits in Mehargarh III (Jarrige & Meadow 1980 : 130) finding its way to Shahr-i Sokhta, Shahdad (Salvatori 1977) in the west and Chanhu-daro in the east.

**Pressure Contact Situation**

Ths third type of contact situation occurred in the Damb Sadaat I-II phase and in the period of the establishment of the Pre-Harappans in the Indus system. At the end of the fourth millennium B.C., some natural calamity or demographic spillover, or may be both, forced people from the Tedjen delta in search of new lands. These folks belonged to the Geoksyurian tradition, characterized by the so-called Quetta Ware, typical stepped motifs, opposed triangles, compartmented seals, double spiral-headed pins, etc. Suddenly, at the end of Damb Sadaat I and in the beginning of DS II, these elements are found in Mundigak II, DS II-III Mehargarh VI, Shahr-i Sokhta, etc.

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Their sudden appearance indicates the arrival of new people in these cultural zones. This was not through diffusion of some cultural traits or economic interaction, but an altogether different situation in which the Geoksyurians of Namazga III moved in groups and settled down at various places. In Iranian Siestan they reached Shahr-i Sokhta. In Afghanistan and Baluchistan they lived together with local people with their own cultures. At some places they were in large numbers, and so the Geoksyurian elements appear prominently at Damb Sadaat. However, at sites like Mehargarh VI, Geoksyurians completely merged with local cultures. Though Mehargarh has yielded Turkmenian elements yet, it is quite clear that the local elements remained dominant. One should not imagine a Namazga III settlement in Baluchistan. By and Large, these people had not move down south to the Kalat area. However, motifs like stepped pyramids and double saw-edge designs had been picked by Nal potters from some ceramic centres, like Mehargarh. A few other elements were widely popular like double spiral-headed pins and leaf-shaped arrowheads which have been reported from pre-Harappan settlements of the Greater Indus valley. Turkmenian sites have yielded them in abundance. The pre-Harappans in the Indus picked up these elements from Baluchistan. Earlier, the terracotta figurines with joint legs were considered Turkmenian in origin. However, the discovery of these terracotta figurines earlier at Mehargarh has ruled out this possibility.

The other such contact situation arose with the pre-Harappan (Kot Dijian) movement from northern Baluchistan to the Indus system. This has already been discussed. In short, these Kot Dijian people moved from the Zhob and Loralai valleys in groups and occupied either the neolithic settlements of Potwar or the Gomal plains or the Punjab, or occupied virgin land for the first time. But here the situation is more complex. The Kot Dijians did not merely survive along with the local population but over-powered them. And the intensive regional interaction created a cultural sphere. From this cultural sphere, people moved out to occupy new lands. The first pre-Harappan settlements on the Gomal plains in the Potwar region, Punjab and Sind are indicators of this pressure contact situation which resulted in the migration of people. However, the settlements east of the Indus, in the dried up rivers of the Ravi and Ghaggar, are only due to regional growth.

This whole review presents a coherent picture before us. That, before the rise of the pre-Harappans, long distance regular trade is a superfluous discussion. In fact, nomadic people played an important role in the trade of luxury goods to far-off places. And three types of interactions occurred : Intensive regional interaction which was evolved only for the sake of supporting subsistence economy. Secondly, marginal inter-regional interaction, basically economically motivated, involved the supply of luxury goods and, through that, intrusive elements reached distant lands. And thirdly, the pressure contact situation in which groups of people migrated from Turkmenia and settled down in Iran, Siestan, Afghanistan and northern Baluchistan along with the local people and, in the process, lost contact with their homeland. The Kot Dijians also come under this last category. Migrations from northern Baluchistan and their distribution in a vast area force us to think that there was intensive interaction in the cultural zone also. However, in this vast cultural zone there were a number of regional culture-areas also, as witnessed by archaeological materials which reflect regional variations.

Thus Baluchistan, being on the western border of the Indus, interacted more with the West than with the East, though the pre-Harappans of the Indus valley may have depended

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upon Baluchis for their raw materials, the Indus valley itself being devoid of these. Earlier writers called Baluchistan a corridor that transmitted men, cultures and ideas from the West to the East in waves. However, the situation seems to be the other way round: Baluchistan always served as a strong barrier where foreign waves came and got absorbed into local cutlures; and were thus unable to cross hills and deserts to reach the Indus system. Therefore Baluchistan always maintained her autochthonous cultures, which are typical Baluchi hill or river valley products. Baluchi cultures interacted widely both with West Asia and the Indus, but developed locally and independently.

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# CHRONOLOGICAL FRAMEWORK AND DEVELOPMENTAL STAGES : A NEW PICTURE EMERGES

5

TO form a proper chronological framework and to assign logical terms to Baluchi and Indus cultures are the two most difficult problems of Indian protohistory. Before the advent of radiocarbon dating, relative dating was the only method of solving them. Piggott (1950) used it on the analogy of the Iranian chronological framework provided by McCown (1942). He extended Iranian models to Baluchi cultures by dividing them on the basis of ceramics with parallels at Iranian sites. After the introduction of radiocarbon dates, however, relative dating was questioned in many countries: Egypt, Mesopotamia and the Indus were thus affected. There was a general trend towards shorter chronologies. Dates based on king lists, on objects belonging to one country found in another in datable contexts, etc. were openly discarded in favour of radiocarbon dates. Kile Gul Mohammad was taken to be the earliest chalcolithic culture in Baluchistan and dated to 3500 B.C. The Indus Civilization was dated to what is generally called D.P. Agrawal's 'shorter chrolonogy' of 2300-1750 B.C. (Agrawal 1971, 1982).

Fortunately, scholars of relative dating, like Mortimer Wheeler (in Subbarao 1958) always expressed serious doubts in the validity of this dating method. The sixties passed in this battle and then, by 1975, the pendulum swung in the opposite direction. Many corrections to radiocarbon dates were suggested by scientists of which the best known is the MASCA, based on dendrochronology, to obtain real absolute dates. It pushed back many $^{14}C$ dates of the fourth, third and second millennia B.C. by hundreds of years, sometimes even beyond those earlier suggested by relative chronology and chronology based on king-lists. But on the whole it has been realized that if corrections are judiciously introduced into radiocarbon dates, serious discrepencies between king-lists, relative Dates and $^{14}C$ dates are resolved and chronologies for the fourth, third and second millennia become more rational and acceptable than hitherto. After Piggott and others, Fairservis and DeCardi have established a chronological framework for the Baluchistan region. Dales in 1965 and 1973 and possehl in 1985 have tried to bring in order in the chaotic condition of the chronology of Baluchistan. In 1973 Meadow also attempted a chronological framework for Baluchistan. Most recently DeCardi (1984: 61-68) has presented a correlation of northern and central Baluchistan with the Mehargarh sequence mainly on the basis of pottery sequences but also keeping in view the radiocarbon dates. We have, therefore, reasonably clear picture of the fourth and third millennia time table for the chalcolithic cultures of Baluchistan; the cultural sequence for the earlier cultures going back to the seventh millennium B.C. is, however, based only on a couple of sites.

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**The Mehargarh and Anjira sequences : comparative chronologies (After Decardi 1984)**

| *BC* | | *Mundigak* | *Quetta* | *Mehargarh* | *Anjira* | *Nal* | *'Kulli'* | *Amri* |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | H |
| 2000 | UrIII | | | | | | | A |
| | | | | | | | | R |
| 2200 | Akkad | | | | | | 'Kulli- | A |
| | | | | | | | Harappan' | P |
| 2400 | EdIII | | | | | | | P |
| | | | | | | | | A |
| 2600 | EdII | IV | DSIII | VII | Surface | | Bracket | N |
| | | | | | | | ware | IIB |
| 2800 | EdI | | | | | mono | | |
| | | | | | IV | | | |
| 3000 | | III | DSII | VI | | | Early | IIA |
| | | | | | III.iii | poly | | |
| | Jemdet | | | | | | | ID |
| 3200 | Nasr | II | | V | III.iii | | | |
| | | | | | | | | IC |
| 3400 | Uruk | | DSI | IV | III.i | | | IB |
| | | | | | | | | IA |
| 3600 | | | KGMIV | | | | | |
| | | | III | III | II | | | |
| 3800 | Ubaid 4 | | | | | | | |
| | | I | | IIB | | | | |
| 4000 | | | | | I | | | |
| | | | II | IIA | | | | |
| 4200 | | | | | | | | |

**A word about periodization and nomenclature**

In a recent publication, *Frontiers of the Indus Civilization*, (Lal & Gupta 1984) we have adopted the following terminology :

| | |
|---|---|
| Indus Civilization; Harappa Culture | In other words, with 'Civilization' we have used 'Indus' but with culture, we have used 'Harappa'. Both terms stand for the mature phase of the Harappan complex. |
| Kot Diji-Sothi Culture; Early Indus Culture; Early Harappan Culture | This stands for what is now generally called Early Indus or Early Harappa. Those who use these two terms rationalize this usage on the basis of the fact that the two assemblages, Kot Diji and Sothi, precede the Harappan assemblege in the mixed form and also overlap it in a big way; i.e., the entire complex merged into the Harappan with an initial overlap. |
| Pre-Early Indus Pre-Early Harappa | These terms are used for cultures which precede the Kot Diji-Sothi and do not normally overlap with the Harappan; the mixed presence of a few potsherds of the two assemblages |

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here and there is to be ignored. The terms are interchangeable.

In India the terms commonly used in the context of Harappan studies are as follows:

| | |
|---|---|
| Harappa Culture | This stands for the mature phase of Harappa Culture. |
| Pre-Harappa Culture | This stands for Kot Diji-Sothi complex as well as Amri and Nal cultures, all of which preceded Harappa Culture and overlapped with it in one way or another. The ideal stratigraphic situation exists at Kalibangan. |
| Pre-Pre-Harappa Culture | This loosely stands also for all the chalcolithic cultures of Baluchistan and Afghanistan which precede the Harappan as well as Kot Diji, Sothi, Amri, Kulli and Nal. |

The Archaeological Survey of India has as yet not adopted the term Early Indus or Early Harappa for one very specific reason: the qualifying term 'early' when used with any culture denotes, unquestionably, only the early stage of that culture. It is like the childhood of a human being—physically speaking, all parts of the body whose development we see later exist during this period, they are only small in size; culturally speaking he starts his learning with basic letters. In other words, terms like Early, Mature and Late stand for three stages in the culture exactly in the same fashion as in the life of a human being. The three stages are organically related with each other and one develops into the other imperceptibly. This is called the Evolutionary Model of Culture growth.

The Survey argues that the Kot Diji-Sothi complex's relationship with the Harappan Complex is not that of childhood and adulthood, it may be that of the mother and child, but obviously both existing as two separate entities; in course of time the mother dies but the child lives on with all inherited characteristics as well as many newly acquired ones. The script, weights and measures, the citadel and various other features of the Mature Harappa Culture do find their formative stage in the Kot Diji-Sothi complex. Hence, the use of the term Early Harappan for the Kot Diji-Sothi Complex they argue is premature, if not entirely incorrect.

**Merits and Demerits of Terms**

Of course, no term in prehistory can satisfy all arguments and counter-arguments; only general principles, some kind of consensus, and long usage, provide validity to a term.

Historically speaking, Amri was declared pre-Harappan by N.G. Majumdar (1934) and since then the term was applied to many chalcolithic cultures of Baluchistan. Archaeologists like McCown (1942) and Piggott (1950) were influenced by powerful ideas—both emerging out of the diffusionary model—first, that the Harappa Complex emerged directly or indirectly from the diffusionary cultural impulses from Mesopotamia via Iran; and secondly, that the Baluchi cultures were only an extension of the Iranian cultures and, therefore, served as the immediate precursors of the Harappa culture.

Wheeler (1968: 23) while agreeing broadly with these propositions, also made a spirited appeal for the independent growth of the Indus or Harappa Culture as 'a product of lowland environment'. The uniqueness of the Harappa Culture was also emphasized in clear terms. Obviously, the formative period of Harappa Culture was beyond his vision, even if some of the cultures in Baluchistan or the Indus were early contemporary; to him these were pre-Harappan as well as non-Harappan in origin. The Kot Diji and Sothi complexes were known

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to him from the beginning of the excavation but to him the difference between them and the Harappa Culture was greater than the similarity. Hence, he could never call the former Early Harappan. The Archaeological Survey of India, in the discipline of its former Director General, the late Sir Mortimer Wheeler, still accepts only the verdict of stratigraphy and none else.

On the other hand, American scholars, who learnt archaeology within anthropological models, are trying to solve archaeological problems on theoretical grounds, built in a series of logical arguments. For them artefacts are the products of culture and not culture itself. All culture explanations are based on continuity and change in the framework of culture interaction and aculturation. Mughal (1970: 147-155), the greatest hard-liner for the terms 'Early Harappa' is a product of the American School of Archaeology. To him, there is no point in calling Kot Diji and Sothi as 'pre-Harappan complexes' since these two cultures are found organically absorbed in the body of Harappa Culture. To him, it is also apparently of no consequence that in Potwar and some other regions the Kot Diji Culture did not evolve into Harappa since Harappan Culture cannot be compared with human body which normally has all limbs growing in accord; cultures grow at different places differently, with the occasional back-waters too.

F.R. Allchin (1968) tries to rationalize it by saying that the mature Harappan Culture represents the urban phase of the basically rural culture of the Kot Diji-Sothi Complex. But this is hardly so since there are a number of village settlements of the mature Harappans in Saurashtra as well as in Rajasthan.

However, this controversy on Harappan and Early Harappan cannot, we feel, be extended to Baluchistan for the simple reason that Harappa Culture was never a force there and no nomenclature for a region can be based on cultures which only marginally interacted with local cultures.

There is a great deal of literature on Baluchi archaeology, several of them are syntheses produced with great labour but they all lack proper terminology and periodization. In the absence of locul culture of the Harappan type in this region it appears advisable to use traditional terms based on terminologies with some cultural connection—such as the Neolithic, Chalcolithic and the Bronze Age.

The Neolithic is further divided into Pre-Ceramic and Ceramic, while the Chalcolithic is divided into Early and Advanced. The Bronze Age is also divided into Early and Advanced. Thus the whole prehistoric sedentary history of the Baluchi people can be conveniently divided into six major stages. The cultures or cultural levels which we allot to these stages may be as follows :

*Fig. 5.1 & 2*

| *Stages* | *Sites and levels* |
|---|---|
| Bronze Age (Advanced) | Mehargarh VII, DSIII, Mundigak IV, Kot Diji Amri IIA-B, Nal, Kulli, RG IIIc |
| Bronze Age (Early) | Mehargarh VI, DS II, RG III-b, Anjira IV, Gumla II, Mundigak III, Namazga III, Shahr-i Sokhta I, Nal (Polychrome), Amri ID |
| Chalcolithic (Advanced) | Mehargarh IV-V, KGM IV, DS I, Mundigak II, RG IIIa Anjira, III, Amri I-C |

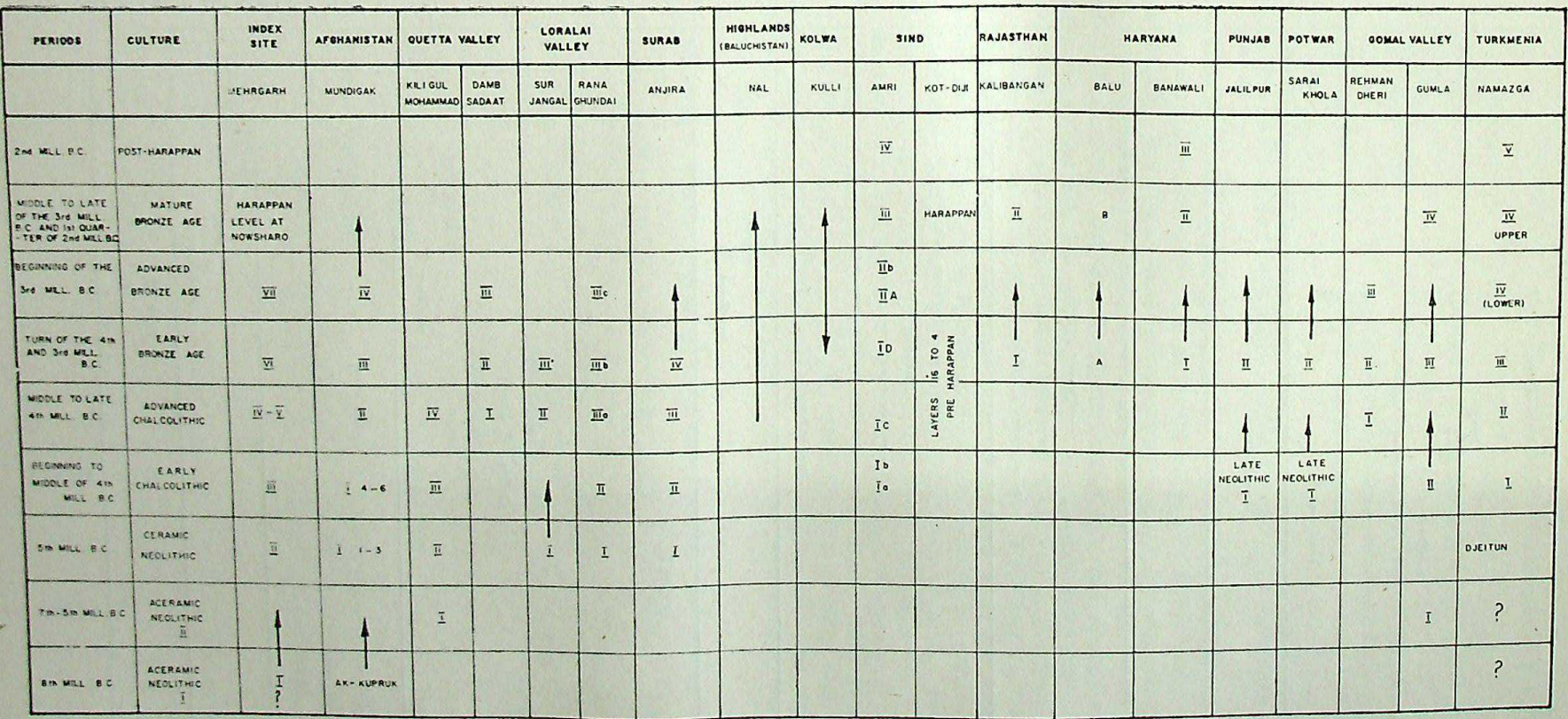


Fig. 5.1. Chronological chart for Early Cultures.

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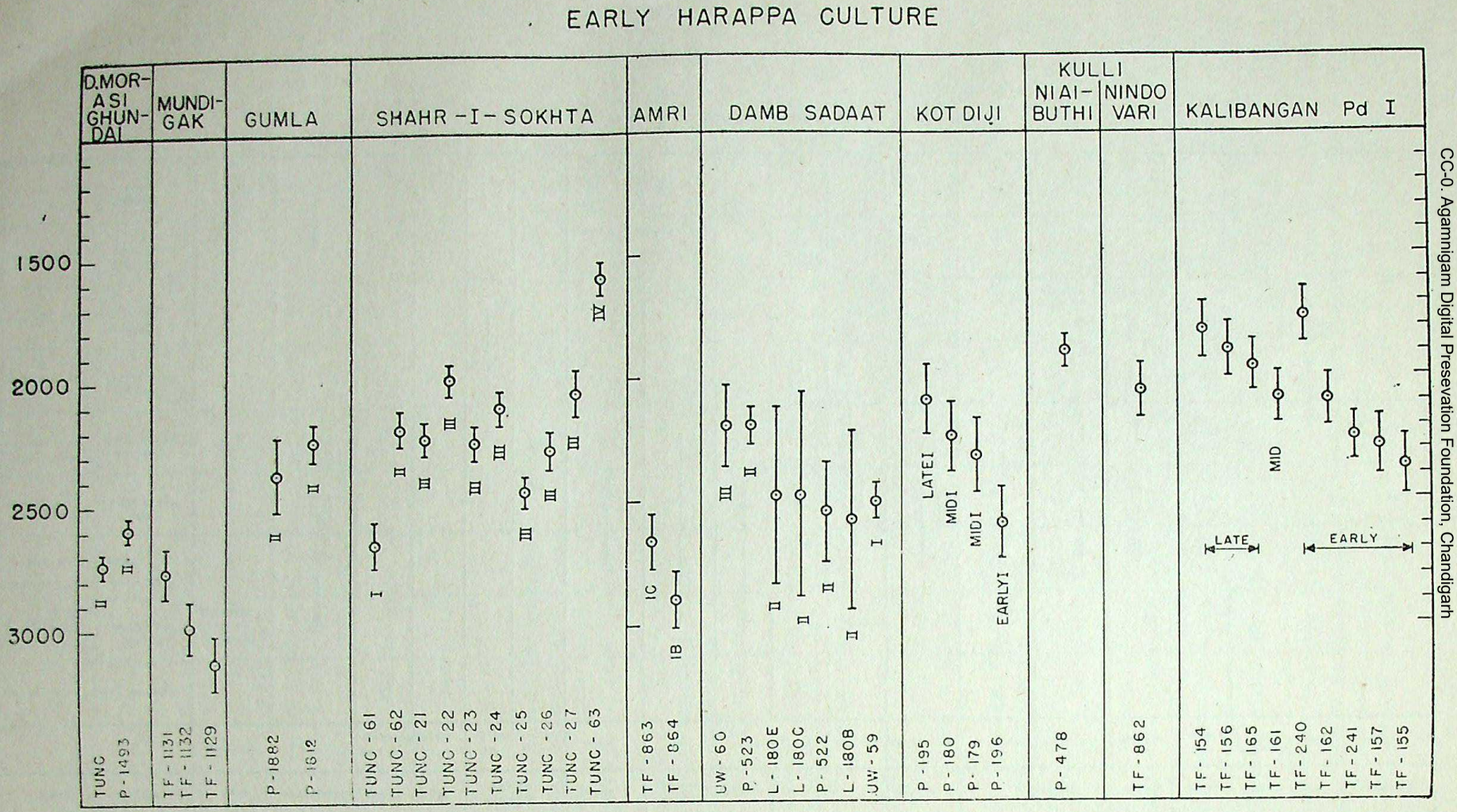


Fig. 5.2. Chart showing Raidocarbon dates.

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| *Stages* | *Sites and leves* |
|---|---|
| Chalcolithic (Early) | Mehargarh III, KGM III, RG II, Anjira II, Amri IA-B, Mundigak I 3-5 |
| Ceramic Neolithic | Mehargarh II A & B, KGM II, Rana Ghundai I, Anjira I, Mundigak I 1-2 |
| Aceramic Neolithic | Mehargarh I, KGM I |

We may, therefore, logically begin our story with Mehargarh since it is now the Index site for the cultures of northern Baluchistan in particular and entire Baluchistan in general.

**Aceramic Neolithic (Seventh—Sixth millennium)**

The discovery of aceramic Neolithic at Mehargarh in 1976-77 field work created a great sensation amongst the South Asian archaeologists (Jarrige & Lechevallier 1979: 468-476). Before this, this crucial stage in human development when man evolved from a hunter-gatherer to a settled food-producer was not clearly defined in South Asia although slight indications were present at sites like Kile Gul Mohammad in the Quetta region (Fairservis 1971: 137), Gumla in the Gomal Valley (Dani 1970-71: 39-41), Ak Kupruk in Afghanistan (Dupree 1964: 638-640). Incidentally, this stage comes under Dale's phase 'B' (Dales 1965: 258-261).

At Mehargarh, this phase of culture is represented by more than 9 m of deposit, called 'Mehargarh Period I'. The unusually thick deposit has mud-brick walls, multi-room rectangular units, polished stone axes, a high percentage of five small retouched flint blades, and a few microliths, all of the chert stone. Fragments of stone bowls, pestles, grinding stones; Lapis, turquoise and shell beads, and bone tools also occur. That agriculture was a part of their life is evidenced by the impressions of various grains in the mud debris. Five radiocarbon dates of the Period I are available now (Jarrige 1984: 22). These range from 5182±80 B.C., 5378±290, 6743±250 to 7716±120 B.C. and even 11790±120 B.C. (all dates uncalibrated, half life: 5730 years). These new dates varied greatly and did not reflect properly the stratigraphical order to which the samples belong.

**Mehargarh : tentative chronology of the earlier periods (After Jarrige 1984)**

| *BC* | *Mehargarh* | *Radiocarbon Dates (5730 years) b.c.* | *Correlations* |
|---|---|---|---|
| 7000 | ? | | |
| | | 11790±120, 7716±120 | |
| 6500 | Period I | 6743±250, 5378±290 | |
| | | 5182±80&6 dates | ? |
| | | between 4322 and | KGM I |
| 6000 | | 3745±180 | ? |
| | Period IIA | | |
| 5500 | | | |
| | Period IIB | 5378±120, 3570±310 | |
| 5000 | | | |
| | Period IIC | | KGM II, Surab I |
| 4500 | | | |
| | Period III | 4745±90 | KGM III, Togau A |
| | | | Mundigak I, 1—3 |
| 4000 | | | |

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However, tentatively Period I has been placed in the seventh millennium B.C. The bones of wild animals, available in plenty in the lower levels of this period (I), have been largely replaced by the bones of domesticated sheep, goat and cattle in the upper levels. This directional change clearly indicates that this site was the nucleus for human development in Baluchistan. This is also borne out by the fact that stone tools of Neolithic and pre-Neolithic types have been found in abundance in all phases at Mehargarh. This adds further weight to the view that the change from Mesolithic to Pre-Ceramic Neolithic took place at this site. Some exceptional finds of this period include five figures made of unfired clay—three human and two animal. These are, therefore, the earliest cult figurines in South Asia.

The discovery of an aceramic settlement is not an entirely new phenomenon in this part of the world. As noted earlier, Fairservis (1971: 137) had come across five metres of occupational deposit, completely devoid of pottery, at Kile Gul Mohammad. But somehow the anthropologist in him came heavily under the influence of another anthropologist-turned-archaeologist, Robert Braidwood, and declared that, for all practical purposes, its independent status should be written off. He, thus, bracketed it with the succeeding phase of Ceramic Neolithic. Two $^{14}C$ dates are available for this phase : $3712 \pm 515$ and $3688 \pm 85$ which with MASCA correction come to 4000 B.C. to 4500 B.C. Clearly, if Mehargarh is accepted as the Index site for this area, this phase can be safely dated back to the seventh millennium B.C. To sum up, we are on firm ground to state that, in Baluchistan, in the Quetta region of the Bolan Pass, there is a distinct phase of human occupation going back to 7000 B.C. which is characterized by aceramic neolithic culture. Significantly, a similar situation exists in Afghanistan.

In 1959, Louis Dupree (1964:638-640) discovered the Pre-Ceramic Neolithic phase of human occupation in a rock-shelter, locally called 'Ghar-i-Mar' (literally, snake house) or Ak Kupruk I. Ak Kupruk II (another rock-shelter) has yielded the same type of deposit which clearly shows that Ak Kupruk I is not an isolated case. The radiocarbon dates place the lowermost level of this Neolithic site in 6600 B.C. ($8650 \pm 100$) and the uppermost level, which was still non-ceramic, in 5200 B.C. ($7220 \pm 100$). The topmost layer of the neolithic, which is marked by handmade ceramics and flint tools, is dated to 5000 B.C. ($7030 \pm 100$).

Gumla on the river Gomal was excavated by A.H. Dani (1970-71:39, 41-42) in 1970-71. This site has also yielded the remains of a pre-Ceramic Neolithic culture. The earliest level of this site, Gumla I, is two-thirds of a metre thick. It has yielded a number of artefacts of stone and bone as well as saddle querns, rubbing stones, pestles, balls and microliths. Neither pottery nor any metal object has been found in these levels.

All these small pieces of evidence put together provide a strong base to our assumption that there was an indigenous culture in the north-western region of South Asia where changes towards neolithism were taking place without outside help. During the seventh millennium B.C., this area was inhabited by the people who were not aware of the use of ceramics but were also not nomadic hunters. They were settling down in favourable environmental conditions with the help of incipient agriculture and animal husbandry. But for these few sites, no other comparable site has been brought to light so far, in the neighbouring area. However, there is still a lot of area to explore afresh, from this angle, in Baluchistan. Beyond Zagros, one of course meets with several such settlements and their importance will be dealt with later.

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**Ceramic Neolithic (Late Sixth-Fifth millennium)**

The Ceramic Neolithic brings us to the next stage of cultural development in Baluchistan and neighbouring regions which is still neolithic but with the addition of ceramics. This stage is clearly fixed in northern Baluchistan and in the upper Indus system and it has its evolutionary sub-stages. At Mehargarh (Jarrige & Lechevallier 1979:477-479), in lower levels, pottery appears on a very limited scale, but with the passage of time, its frequency increased considerably. This phase is widespread. It is represented at Mehargarh II and Kile Gul Mohammad (KGM) II (Fairservis 1971:137) in the Quetta Valley. It is also there in Anjira in the Kalat region (DeCardi 1965:93), Rana Ghundai I in the Loralai valley (Ross 1946) and Mundigak I-2 in the Kandahar area (Casal 1961). It should be noted that the stone and bone tools were still prominent and metal was meagre. In other words, pottery is a new phenomenon in Mehargarh II while all the traits of Mehargarh I continued. This period is dated to the second half of the sixth millennium B.C. and the first half of the fifth millennium B.C.

With this much settled, we may consider the sequence of Kile Gul Mohammad since it also falls in the Quetta region. For this priod, we have here a sequence of KGM II through IV. Dales (1965:260-261; 1973:Fig. 11.1) and Mughal (19702:79), curiously enough, clubbed all three periods into one cultural phase and refused to accept any distinction between them. To our mind, each one of them is a progressive stage towards early bronze age through chalcolithism.

This takes us to the Zhob Valley where Rana Ghundai (abbreviated as RG) is located. Dales (1965 : 278-279) keeps RG I under his Phase C which is early chalcolithic. However, later he (Dales 1973:Fig. 11.1) revised the sequence and bracketed RG I, with the lowest levels of KGM I. But this does not appear to be correct since, while KGM I aceramic, RG I is ceramic neolithic. In truth, RG I can be compared only with KGM II (lower levels) where crude handmade pottery has been found.

In this context, Mundigak, in southern Afghanistan, may also be considered. At one stage, Dales (1965:278-279) felt that Mundigak I, 1-2 may be equated with RG I since he included both of them in his cultural stage 'C' which represents the beginning of chalcolithic culture. But this equation may not be correct since RG I has neither wheel-thrown pottery nor metal, nor the remains of a settled village. In fact, we only notice the remains of a nomadic people with their stone and bone tools and some handmade pottery. As far as Mundigak I, 1-2 is concerned, its radiocarbon date is rather late—with MASCA correction it comes to only 3880-3650 B.C. This, according to our relative dating, should be the sixth-fifth millennium B.C.

The remains of neolithic cultures have been traced in the Punjab and Potwar region also. Jalilpur I, Punjab (Mughal 1974:106-113) and Sarai Khola I, Potwar (*PA* 1968:28-40; Halim 1971:1-112) are the only known sites of this culture in the Indo-Pakistan subcontinent. Mughal (1970:87) has called them 'Late Neolithic'. It is difficult at this point of time to assign a correct time-bracket for them individually or collectively. Roughly speaking, their dating should be much later since, soon after these were occupied by the Kot Dijians. Dales (1973: Fig. 11.1), however, has bracketed Sarai Khola I with RG I which, if true, would place this too in the fifth millennium. The excavator, on the other hand, dates this phase of Sarai Khola to c. 3000 B.C. which also seems far too late for this neolithic. We feel that, since the Kot Diji culture at Sarai Khola itself goes back to the second half of the fourth millennium, the first half of the fourth millennium is proper for this phase at Sarai Khola and Jalilpur. Mughal (1974:109), however, compares Jalilpur with Amri IA on the basis of the similarity in the hand-made thick and underfired light red pottery. However, there is no corresponding evidence to

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support his views. If Jalilpur I is connected with Amri IA, it will mean that both are contemporary and could be dated to 3500 B.C.

Mughal (1981, 1982) in his survey of Cholistan has noticed a new pottery assemblage on ninetytwo sites. He called it 'Hakra Ware' because of its first discovery and concentration along the old Hakra flood plains. The ceramic industry is mostly characterized by handmade red ware with multiple incised parallel and wavy lines decoration. Applique pottery-surface recalls Jalilpur I (earliest levels) pottery. These are also the fabrics of Kalibangan I. Typologically, the tool kit of Hakra period has some resemblance with the lithic materials of Jalilpur I, Sarai Khola I, Gumla I, and even of Rehman Dheri.

*Fig. 5.3*
**Pl. 26 & 27**

It is too early to give definite views on the Hakra complex both regarding its chronological bracket and cultural status since on the one hand it resembles Amri I (fourth millennium) and on the other Kalibangan I (third millennium).

**The Chalcolithic Phase (Fourth millennium)**

The chalcolithic phase succeeds the late neolithic and appears on the horizon of Baluchistan in the beginning of the fourth millennium when man learnt metal technology, as is evident at Mehargarh III (Jarrige & Meadow 1980). During this period, painted pottery gained prominence with geometrical and semi-naturalistic motifs. This phase is widespread and covers a long time-span, both in Baluchistan and in Afghanistan.

Let us consider once again our key site Mehargarh. The chalcolithic phase of this culture begins in Period III of this site. Mehargarh has yielded the pottery types of Mehargarh II upper levels. It is a fine ware decorated with geometric designs and semi-naturalistic motifs. These representations include rows of birds, goats, dot-tipped rosettes, hanging triangles, chequker-board patterns, etc. Their parallels are reported from Mundigak I-3 Anjira II, KGM III, RG II, etc. The animal designs can be related to some extent to the 'Togau A' style of central Baluchistan. Significantly, painted motifs of caprids and birds on Mehargarh III pottery equate this phase with Sialk III or Hissar IB and IC as well as Namazga II. This places them in the same horizon of the first half of the fourth millennium as the zoomorphic motifs with processed caprids found at different sites in Loralai and the Zhob Valley (RG II). However, despite being of the same ceramic tradition, at Mehargarh we notice the evolution of a strong original style which developed later on in the form of processing humped bulls. Inspite of the lack of accurate and comparable radiocarbon dates for all these sites, we are probably in the same chronological horizon. There is only one date available for Hissar IB and IC and that falls in the first half of the fourth millennium B.C. This period has the beads of lapis lazuli, turquoise and carnelian along with cylindrical stone drills. The excavator also uncovered the fragments of several crucibles with traces of molten metal. This was, for the age, a great technological innovation. However, these rich chalcolithic remains have been only found at Mehargarh III. Contemporary sites, like KGM III, Mundigak I-3 and RG II have not yielded such rich remains—which could, possibly, be due to their limited digging. Mundigak, after Mehargarh, has the next best collection of material for this period.

The next phase in chalcolithic is marked by the appearance of new wares in the Quetta region. Kechi Beg Polychrome, Amri bichrome, Anjira and 'Togau B' potteries had, indeed, wide distribution in this phase. By this time, animal and bird motifs have disappeared and the capirds slowly changed into zig-zags. Also, large open bowls are decorated by registers of loop and tassel motifs and horned friezes. This phase is clearly demonstrated at Mehargarh IV, KGM IV—DS I, Anjira III, RG III A and Amri IC.

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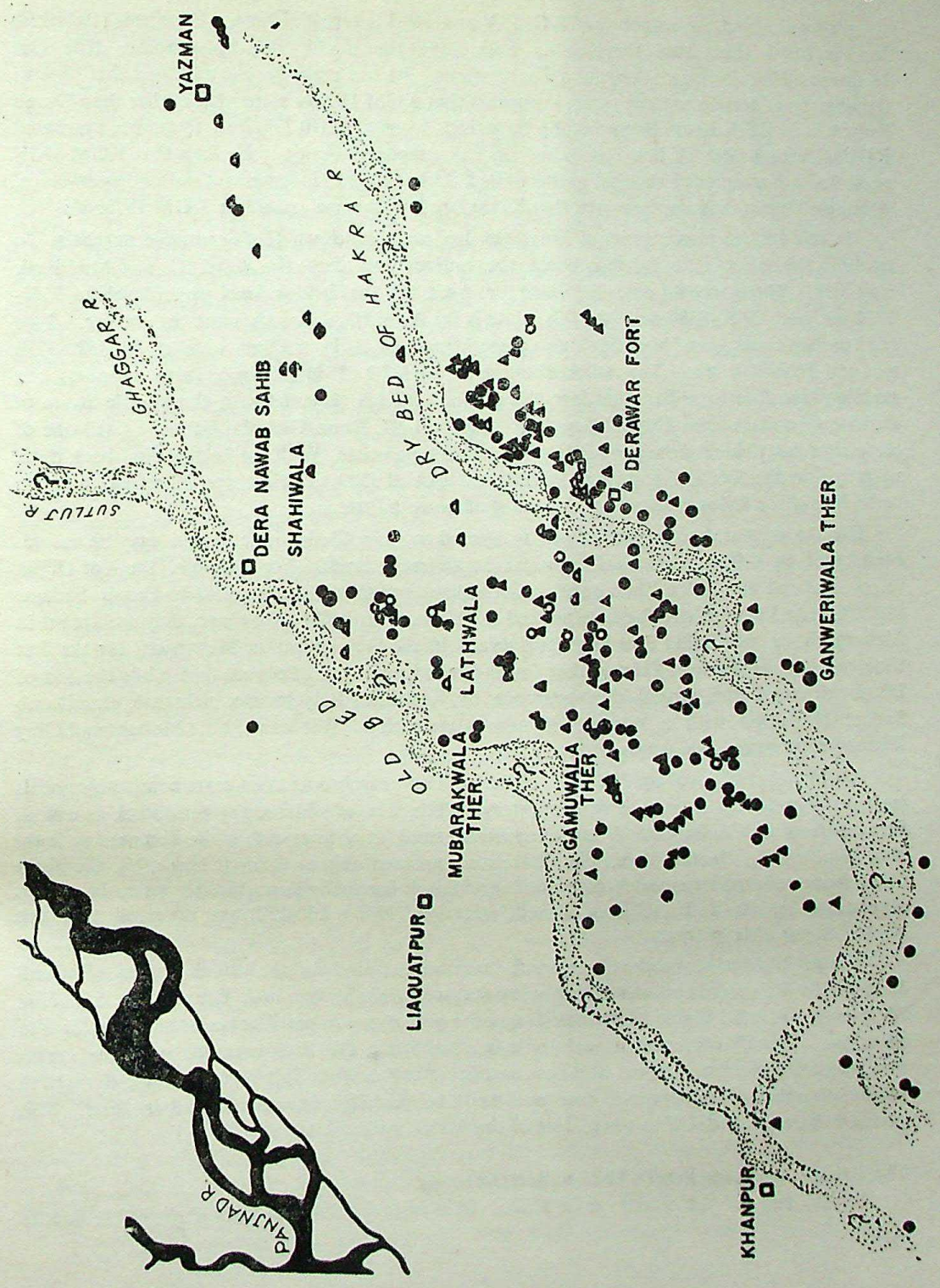


Fig. 5.3. Map showing concentration of Pre-Harappan sites along the dry bed of Hakra.

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A word about the sequence of KGM IV and DS I is essential here. Fairservis (1956:354) has bracketed these two together as both have the Kechi Beg Polychrome, Kile Gul Mohammad Black-on-red, Amri and Togau wares. At one place he has admitted that due to the absence of certain pottery types, it appears that KGM IV was somewhat earlier than Damb Sadaat I. In DS I, Kechi Beg was fully flowering. Mughal (1970:279) has, therefore, bracketed KGM II with KGM IV but considered DS I as a separate entity. He feels that KGM II-IV presented a homogenous cultural group while DS I has its own independent pottery assemblage, although Mughal has also accepted that Kechi Beg Polychrome existed in KGM IV levels.

In this context the ceramics of Mundigak $I_{4-5}$ and Mundigak II also provide parallels. To establish the correct date for this phase, the radiocarbon dates for Amri ID and Mundigak may help. There are two dates available for Amri ID that brings Amri upper levels to 3540-3210 B.C. and 3650-3380 B.C. As this date is for Amri ID, Amri IA must be earlier. Two radiocarbon dates from Mundigak also place Mundigak $I_5$ in the time bracket of 3520-3210 B.C. and 3720-3410 B.C. The radiocarbon date for DS I (3540-2590 B.C.) also supports the middle of the fourth millennium for this phase. DS I is equated with the Middle Strata of Periano Ghundai of the Zhob Valley, Sur Jangal II-III, Rana Ghundai III a-c. Each one of these sites has yielded some potsherds of Kot Diji type wares. With the help of feed-back data, we may date the Kot Diji culture in Baluchistan around 3500 B.C. However, its arrival appears to be late in the Indus system to which we shall come a little later.

For the present, two important points related to this Chalcolithic phase may be noted. First, that in different places it appears at different times. For example, the Kot Dijian wares appeared first in the Zhob and Loralai Valleys and then they travelled to Damb Sadaat in the Quetta Valley where they are noticed in DS I and II both. However, they are absent in Mehargarh in the Bolan Pass in contemporary levels; they appear in Mehargarh for the first time as late as Period VII and that too in limited numbers. Second, that while the end of DS I witnessed the virtual disappearance of Kechi Beg Polychrome, bichrome, etc., Damb Sadaat II started with a number of new wares such as Wet wares, Faiz Mohammad Grey Ware, Quetta wares, Nal wares, etc.

At Mehargarh also by the end of Period IV, polychrome disappears completely and is replaced largely by a monochrome pottery. The use of white along with black as well as floral pattern in Mehargarh V are important since at a later date white was used in Sothi also. Significantly, Quetta Ware, Wet Ware etc. appeared only in the next phase, VI, the phase which is represented by monochrome pottery which, it is equally important to note, is almost absent at other sites in Baluchistan, although Jarrige (1980 : 130-132) has observed that this phase has parallels in Iran.

Togau 'D' Motifs, on the other hand, have been found in the Surab region (DeCardi 1965:129). This represents the evolutionary stages of Faiz Mohammad Grey Ware and Faiz Mohammad Painted Ware. Fish motifs and the prototypes of *pipal* leaves occur here for the first time. That this is a transitional phase is clear from the disappearance of older motifs and the evolution of new wares and new motifs. According to Jarrige (1980:130), during this period a number of settlements, such as Amri and Kot Diji, were established in Sind. This period can be safely dated to the middle of the fourth millennium.

**The Bronze Age (Late Fourth-Third millennium)**

In the end of the fourth millennium, Baluchistan enters the early phase of the Bronze

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Age. In this period the Quetta region witnessed the emergence of 'Turkmenian' painted designs on pottery (Namazga III) in the indigenous cultural milieu of the earlier period.

Mehargarh VI typifies this phase. It had fifty per cent red painted pottery with *pipal* leaves and other associated motifs of Period V. Pottery with geometric motifs painted in black and white on red are still common in the lower levels. Grey Ware with vegetal and animal designs have also been found. Some scenes showing humped bulls recall the Kulli style. A wolf catching goat recalls an identical scene painted on a pot from Amri IC (Casal 1964: Fig 63-208). This also has 'Central Asian' elements on the other half. The Quetta Ware painted designs assume Turkmenian styles. It is associated with leaf-shaped flint arrowheads; compartmented seals in terracotta and stone; double spiral-headed copper/bronze pins, etc. This cultural milieu is noticed in Namazga III, Mundigak III, DS II-III, Shahr-i Sokhta I, Gumla II, Rana Ghundai III b-c, Sur Jangal II-III. Significantly, 'Turkmenian', traits dominated the scene in northern Baluchistan more in the last quarter than in the middle of the fourth millennium.

However, the situation is different with Mehargarh which saw the 'Turkmenian' elements on limited scale. The geometrical motifs of Quetta Ware were not as popular at Mehargarh as at Damb Sadaat (II) since, in the former, these motifs were localized and adjusted in the local ceramic industry. Nal and Amri ID potteries continued in period VI at Mehargarh. The same is true of Mundigak III, Anjira III-IV and Gumla II.

By and large, it seems that Turkmenian-Quetta influence was strong only at sites not culturally advanced, since sites like Mehargarh were culturally developed enough to absorb alien traits into their local industry their influence was minimum.

There are four radiocarbon dates for DS II period but all of them place it in an earlier cultural and chronological horizon. These dates are 3600-2610 B.C., 3630-2650 B.C., 2850-2560 B.C. and 3380-2920 B.C. This period can be safely dated to the third quarter of the fourth millennium. This is the period when the first settlements appeared in Punjab, Rajasthan and Haryana.

The next phase is the Advanced Bronze Age which witnessed the climax of cultural development in Baluchistan. It had just preceded the Mature Harappan Culture and is contemporary to the Pre-Harappan cultures of the Greater Indus Valley. The Bronze Age is clearly seen at Mehargarh in Period VII. It saw the birth of monumental structures, fine grey ware decorated with black painted geometric, plant and animal designs and motifs, plain standarized pots, goblets, brandy glasses, etc. as well as the Wet Ware. Buff Ware pots were often decorated with Sadaat type of Quetta Ware. The Zhob style of mother goddess figurines, male terracotta figurines, animal figurines of the Zebu humped bull, compartmented seals and double spiral bronze pins have all been reported from Mehargarh VII. Most interestingly, Mehargarh VII has produced Kot Dijian pottery along with terracotta cakes and parallel-sided flint blades. However, northern Baluchistan (Zhob and Loralai and Quetta—DS II) had the Kot Dijian material in levels of earlier date than that of Mehargarh VII. In any case, the Mehargarh VII finds are paralleled at Mundigak IV, DS III, Kot Diji, Nal and Amri II B. There is only one radiocarbon date for DS III which places this period between 2940-2350 B.C. Thus, the central date is 2800 B.C. Around this date, a number of old and established sites have been found abandoned. However, a few mature Harappan sites are located in Baluchistan, in the piedmont like Nowshero, close to Mehargarh which has yielded Indus sherds only from the upper most level.

The Amri, Kulli and Kot Diji cultures have been constantly repeated in the above

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synthesis. Amri and Kot Diji are the two main Pre-Harappan cultures of Sind while Nal and Kulli are the Bronze Age cultures of southern Baluchistan. It will, therefore, be worth our while tracing the origin and expansion of these cultures in southern Baluchistan and the Greater Indus Valley.

As detailed earlier, the first impetus to Amri, Kot Diji and Nal cultures came from sites in northern Baluchistan as early as 3500 B.C.—3000 B.C. Around 3500 B.C. during the chalcolithic phase, some unusual disturbances took place in northern Baluchistan. We do not know as yet the causes underlying this phenomenon. But Amri and the Kot Diji people shifted southwards from north Baluchistan in Mehargarh IV, KGM IV and DS I periods.

Gumla II, a Kot Diji culture site in the Gomal Valley affirms this analysis. Gumla II has 'Turkmenian' (Namazga III) plus the Kot Dijian elements of the initial stages—all of which seem to emanate from some site in northern Baluchistan, possibly the Zhob-Loralai valley, using Kot Dijian wares. Later on, in Gumla III, the 'Turkmenian' elements disappear and Kot Dijian elements emerge.

If we accept this proposition, the date for the migration from the Loralai Valley to the Gomal plains will go back to 3200 B.C. However, this date is applicable to Gumla (II) but not to the site of Kot Diji and Amri. Radiocarbon dates and relative dating by now have proved that upper Sind was inhabited by Amrians and Kot Dijians by 3500 B.C. It is extremely significant to note that while Amrians flourished in Sind and southern Baluchistan only, the Kot Dijians spread to Punjab, Rajasthan and Haryana. The problem of dating the expansion will be easier if we come upon a DS I phase site with Turkmenian elements as Gupta (1979) once felt. During the DS II period, the Quetta-Zhob-Loralai Valley was flooded with pottery showing 'Turkmenian' geometric designs. If this phenomenon had happened in DS I, the migrations of the Kot Dijians and Amrians could be easily traced. However, all we can say for the present is that both of these cultures, contemporary to each other, settled in Sind around 3500 B.C. and stayed till the Harappans arrived around 2500 B.C. and took them over. The 'Turkmenian' designs, are, however, also upheld as 'Quetta' in origin in some quarters.

The second Kot Dijian wave entered Punjab, Rajasthan and Haryana around 3000 B.C. and developed, in time, strong regional variations. At the moment, the second wave is not quite understood, except that it reached Harappa where Periano pottery has been found in layer 26. However, the Kot Dijians settled in places now locally known as Kalibangan I, Sothi, Siswal, etc. It is now amply clear that at many places the Kot Diji culture overlapped with the Harappan, as at Kalibangan. A number of dates for Kalibangan are available. However, the most appropriate date for these eastern Pre-Harappan cultures of the Punjab, Rajasthan and Haryana is provided by Kalibangan I : 3110-2690 B.C., 2970-2600 B.C. and 2940-2600 B.C.

Now to the dating and the horizon of Nal Culture. As we know the maximum number of Nal pots have been found in the cemetery of Sohr Damb in the highlands of southern Baluchistan (Hargreaves 1929). Its origin may be traced to Kechi Beg Polychrome Ware of the Quetta region in the middle of the fourth millennium. Nal Ware has been reported from Mundigak III, DS III, Mehargarh VI-VII, Anjira III-IV, Shahr-i Sokhta I and Tepe Yahya IV C. All these sites date the Nal pottery around 3200 B.C. Apparently, the Nal tradition migrated from Baluchistan later than Amri, since Amri and Nal are partially contemporary. Sites like Rohel-jo-kund have yielded Amri and Nal wares from one and the same level. At Balakot I also, Nal and Amri potteries have been found together. Recently, the number of Nal settlements found in south Baluchistan (Fairservis 1971:208-216) show that Nal Culture was not as much isolated as it was imagined to be a few decades back. DeCardi (1984:63) has rightly

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observed the following features regarding the position of Nal Monochrome and Polychrome pottery in relation to other northern Baluchi Wares: "Ceramic production expanded considerably during Mehrgarh VI, a period at the start of the third millennium corresponding to Damb Sadaat II and Mundigak III. both sites on which Quetta Ware was common. Quetta Ware occurred only sparsely in Mehrgarh VI but its presence there with some Nal Polychrome confirms the partial contemporaneity of those Wares. A similar relationship was observed at Said Qala Tepe in South-eastern Afghanistan, where an example of Nal Polychrome was associated with Quetta Ware. Contrary to the Mehrgarh sequence, in which Nal Monochrome occurred in Period VII, the order was reversed at Said Qala, where a little Nal monochrome was found in a deposit pre-dating the polychrome and some degree of caution is required in using the monochrome as a horizon marker. On the Surab sites, polychrome of the kind known from the Nal cemetery some 60 miles further south was rare, appearing late in Anjira III, and it is not possible to say whether the few sherds combining yellow or green infill were genuine Nal or merely local copies. Most of the Anjira IV pottery was in a style clearly influenced by Nal and similar designs are interpreted in monochrome as well as black with plum-red infill. Its distribution suggests that the 'Nal type' ware was most probably made in Surab Valley."

Lastly, the Kulli Culture of the south Baluchistan is comparatively later though many earlier supposed to be contemporary. It is also partially contemporary with Harappan Culture. At Balakot II, Kulli pottery, terracotta, etc. have been found together with mature Harappan antiquities. It is thus later than the Amrian and Nal Cultures of Balakot I. Kulli remains in Persian Gulf sites coexisting with Mesopotamian antiquities shed significant light on the role of the Kullis in the network of Harappan trade (Dales 1969:16). In recent years, a number of Kulli settlements have been explored in the valleys of Kej and Mashaki. It appears that northern Baluchistan was also the probable home of the Kullis. The humped bull motif at sites like Kile Gul Mohammad and Damb Sadaat and the bull frieze with bird and vegetal motifs at Mehargarh VII also recall the Kulli's ancestory.

To conclude, we have now a long sequence of cultures both in Baluchistan and the Indus plains preceding the Indus Valley Civilization. The earlier sequence, suggested by scholars like McCown, Piggott, Wheeler and Fairservis, was more or less based on pottery correlations of a dubious nature, which, in turn, initiated all kinds of suppositions on group migrations. Terms like the Red Ware Zone and the Buff Ware Zone are no more heard. Credit for the spadework, of course, belongs to the above named scholars but the turning point was the discovery of Mehargarh on the Bolan Pass. This important excavation not only provided us with a firm sequence of cultures in this part of the subcontinent but also enabled us to date the sequence.

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# SUM UP 6

THE chronology of the beginning of civilizing process in Indian sub-continent has been debated for several decades. Till recently, the maximum antiquity to which the excavations could take us was 4000 B.C., at Kile Gul Mohammad in Baluchistan. Beyond this, it was Stone Age nomadism. On the other hand, in West Asia the antiquity of civilization with Neolithism, (settled agriculturists, occasionally using metals and minerals brought from distant lands) had already been pushed back to 7000 to 8000 B.C. at sites like Cayonu in Turkey. This apparent gap of about four thousand years between the two otherwise equally significant areas for the beginning of civilization was an irritant with South Asian archaeologists.

Similarly, there has not been any substantial amount of data on the chalcolithic cultures which immediately preceded the Indus Civilization and provided its much talked about ethos, form and contents. Sir Mortimer Wheeler's observation that here was a book (Indus Civilization) whose first and last chapters are missing, is still held valid in the minds of common readers. A vigorous search for locating the missing links at either end of the Indus Civilization was initiated in 1958. This bore fruits in 1973, to be exact, when the site of Mehargarh on the Bolan Pass, overlooking the distant Indus, was discovered since its antiquity went back to 7000 B.C., if not earlier, and its life-span continued till almost the beginning of the Indus Civilization.

The problem of the origin and formative stages of the Indus Civilization was, however, still far from solved. It was made extremely complicated because of a long legacy—for more than half-a-century the hills of Baluchistan were dotted with village cultures, both neolithic and chalcolithic, apparently of pre-Harappan times, but their origin was again and again traced to the Iranian cultures. The Irano-centric view of the early neolithic and chalcolithic cultures of north-western India was so dominant in the minds of scholars like Stuart Piggott, who authored the *Prehistoric India* in 1950, and D.H. Gordon who published *The Prehistoric Background of Indian Culture* in 1958, that the view of autochthonous development of these cultures was considered simply out of question.

In 1967 Fairservis synthesized the archeological data and visualized the development of civilization in India, from the neolithic to the end of the Indus cities, through five stages (i) Pastoralism with limited cultivation; (ii) Developed cultivation and pastoralism: Beginning of regionalization; (iii) Fully developod sedentary village life: regionalization but interregional contacts; (iv) The period of urbanization; (v) Economic decline and the general abandonment of the Indo-Iranian Borderlands by farmers of developed villages. Gupta (1972-73), on the other hand, presented a visual model of first urbanization in India through six stages (i) Genesis, (ii) Formative Stage, (iii) Efflorescence, (iv) Affluence, (v) Quiescence, and (vi) Disper-

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sal. In these and several other attempts, such as the one presented by Sankalia (1972), the generic relationship of the known pre-Harappan cultures was traced to West Asia and not to the indigenous cultures (Konishi 1984). In the present monograph we have pulled down the curtain on the Irano-centric view and presented the case of independent origin and development of cultures in South Asia. The trend was first set by A. Ghosh (1964) and then vastly elaborated and emphatically argued by Mughal (1970).

But before we start with our thesis, we would like to present the case of some fresh thinking on the beginning of Neolithism itself since that will, at least indirectly, strengthen our case which seeks to place the beginning of civilizing process in Indian sub-continent to almost the same period as in West Asia.

**Neolithism in Epipalaeolithic and Early Neolithic times: West Asian Evidence**

The germs of civilization are born in settled life with permanent sources of living. There has been a considerable debate over the earliest phase of this kind of life in West Asia. It is now generally agreed that this phase lies in the Epipalaeolithic of Palestine, Asia Minor, Mesopotamia and Iran where settlements of tenth-ninth millennia are found subsisting largely on 'gathering', the 'selected' wild cereals, and 'herding' the 'selected' species of wild animals.

Moore has recently (1982) collected a mass of data which takes back the antiquity of the neolithic way of life in Levant to the Epipalaeolithic-I times (18000-10000 B.C.), in the Late' Pleistocene period, when semi-sedentary and sedentary settlements based on 'select hunting' started becoming popular mode of living: gazelle at En Gev I, Nahal Oren and Kebara; goats at Wadi Madamagh; and follow deer at Ksar Akil were killed in much greater numbers than other species of animals. In Epipalaeolithic-2 times (10000-8500 B.C.) the process of selective hunting was intensified—at Nahal Oren the gazelle bones recovered from excavations belonged largely to young and immature ones, and the same was true of goats at Beidha. At sites like Abu Hureyra and Ain Mallaha the people throughout their existence depended on the meat of young gazelle, goats and onagers. This fact shows that these animals were controlled and herded when they were very young. In other words, husbandry of young doemsticable wild animals formed an important part of their everyday life. This 'selective hunting' or husbandry was supplemented by 'selective gathering'. At Abu Hureyra mound, around 9000-8000 B.C., einkorn, barley, rye, lentils, vetches, edible fruits, nuts and seeds of wild but domesticable varieties, have been recorded. The cereal grains were so numerous that at least einkorn appears to have been deliberately cultivated although this cereal was still not fully domesticated since morphologically it was still of wild variety.

This stage was followed by what Moore called 'Archaic Neolithic 1' (8500 to 7600 B.C.). At Tell Aswad in the Damascus basin (7800 B.C.) there is clear evidence of cultivated peas, lentils, emmer and probably barley. At Jericho (7000 B.C.) barley, emmer and pulses were cultivated although from the excavations very few examples have come to light, At both the places selected species of animals were also domesticated since we have now definite evidence of changed morphology in the bones of the slaughtered animals. It is significant to remember that the 'economy of sedentary villages down to about 6000 B.C., rested on a delicate balance of agriculture control of some species of animals and continued hunting and gathering'. After that the 'people all over the Near East relied almost exclusively on their crop and domesticated animals for subsistence'.

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**Neolithism in Late Palaeolithic and Early Neolithic Times: South Asian Evidence**

*Afghanistan*: These Western Asian stages are likely to be met in South Asia also but so far the evidence is meagre. At Ak Kupruk (Dupree 1972; 1973) in Afghanistan some evidence of Epipalaeolithic 'type' is available from the Upper Palaeolithic layers since sheep and goat account for 89% of domesticable wild animals killed for food at the site. As far back in

*Fig. 6.1*

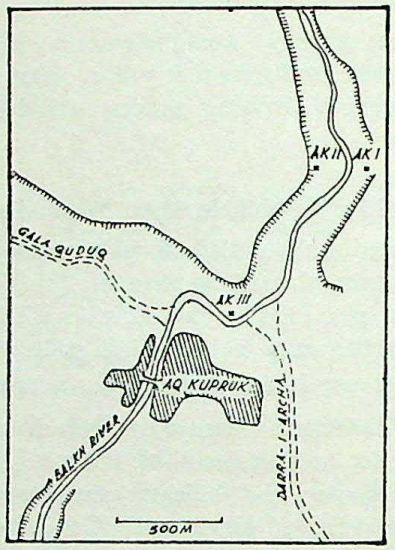


Fig. 6.1. Site location of Ak Kupruk.

time as 1929, two Soviet botanists, Vavilov and Bukini, worked on the wild varieties of wheat in Afghanistan and came to the conclusion that species of these categories must have been domesticated locally. Dupree excavated at three sites in northern Afghanistan in order to understand the logic underlying this observation and sequence of early sedentary cultures.

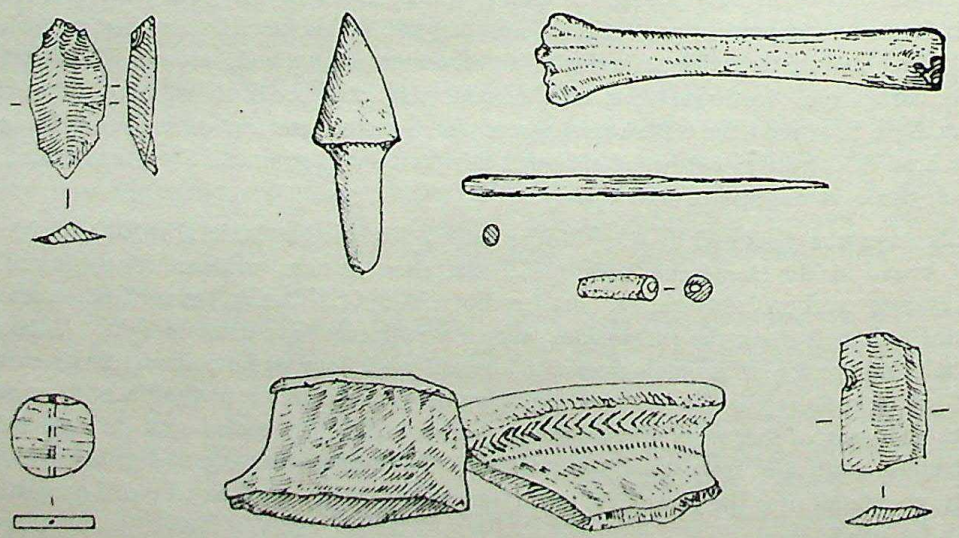

Fig. 6.2. Ak Kupruk : Material Culture.

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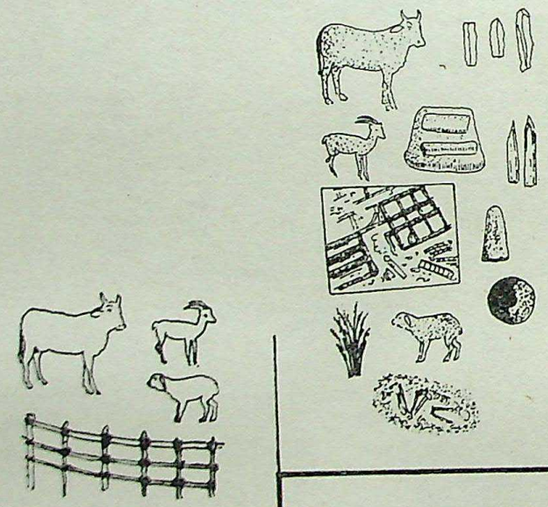
# SOUTH ASIA
## TOWARDS CIVILIZATION
## (10,000 B.C. — 1900 B.C.)



Coming together of two to three families

INCIPIENT SETTLEMENTS

EPIPALAEOLITHIC
10,000 B.C. - 8,000 B.C.

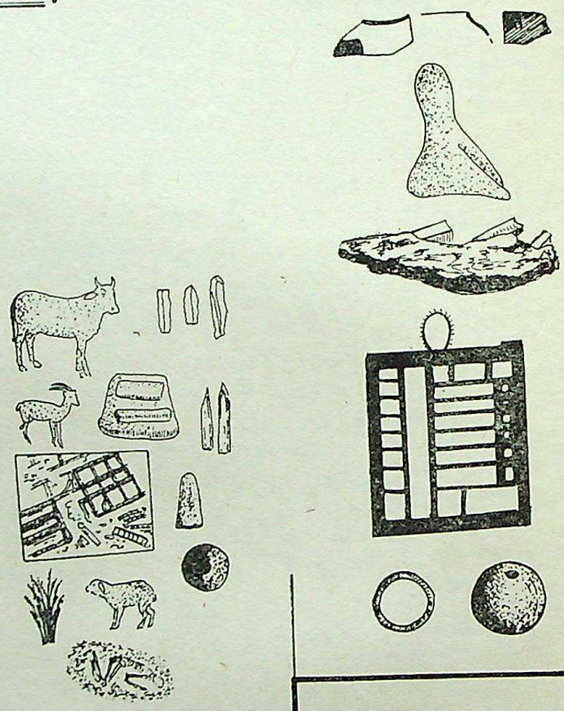
Non-Ceramic

Neolithic A

Type Site: Ak-Kopruk: Char-i-Mar Afghanistan

Incipient Domestication by herding of wild sheep and goat.

Cave dwelling overlooking rivers.



Groups of Nuclear families

NUCLEAR SETTLEMENTS

ACERAMIC NEOLITHIC
(Mehargarh Stage I)
8000 B.C. - 5000 B.C.

Type Sites: Mehargarh I
Kile Gul Mohammad I

Agriculture: Wheat, barley, jujube fruit, stones of dates.

Domesticated animals: Limited: Sheep, goat, cattle.

Wild animals: Dominance of wild sheep, wild goats, wild cattle, gazelles, pigs, etc.

Architecture: Mud brick houses.

Figurines : Clay animal, human.

Burial : Flexed and extended.

Copper : One bead.

Lapis Lazuli, Turquoise, Shell.



Groups of Extended families

EARLY VILLAGES

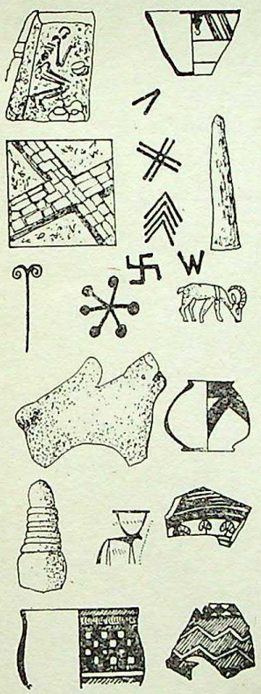
CERAMIC NEOLITHIC
(Mehargarh Stage II)
5,000 B.C. - 4,000 B.C.

Type sites: Mehargarh II
Kile Gul Mohammad II
Anjira I
Mundigak I - 1-2
Rana Ghundai I

Introduction of pottery, first hand made, later wheel-turned.

Proportion of domesticated animals and cereals increased considerably

Granary, Elaborate structures Intramural burials.



Tribal Societies: Kinship system
Semi-nomadism

DEVELOPED VILLAGES

CHALCOLITHIC: EARLY & ADVANCED
(Amri Stage)
4000 B.C. - 3000 B.C.

Type sites: North Baluchistan and Afghanistan
Mundigak I-3-II
Mehargarh III - V
Kile Gul Mohammad III - IV
Damb Sadaat I
Rana Ghundai II-III a - b
Anjira II - III

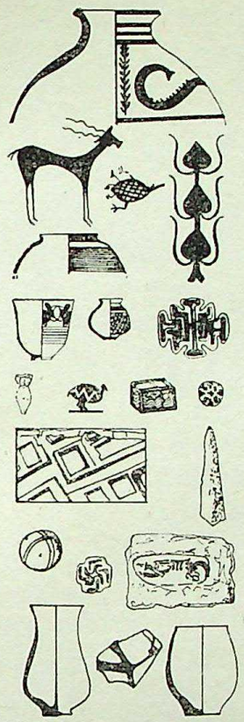
South Baluchistan
Nal, Nundara
Amri Ia
Balakot I

Copper-bronze technology proliferates

Settlements increased in size and concentrate in groups.

Pottery proliferates - bichrome, polychrome.

Mother Goddess figurines predominate.



State Formation

TOWNS

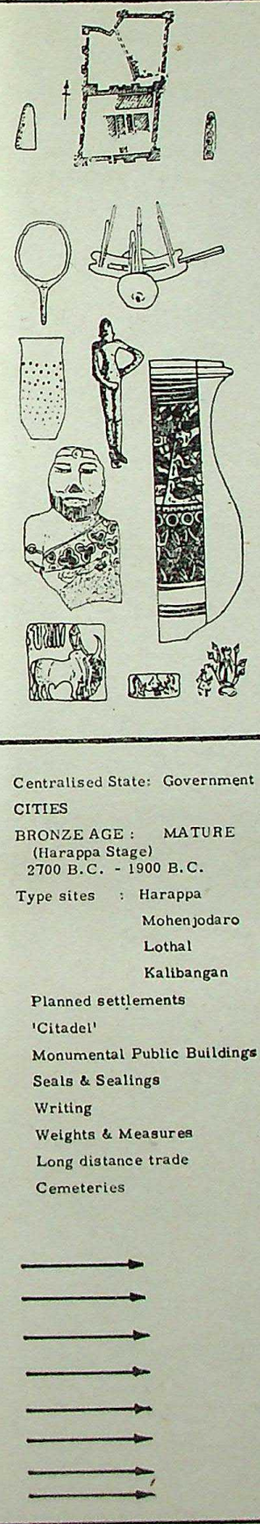
BRONZE AGE: EARLY & ADVANCED
(Kot Diji-Sothi Stage)
3200 B.C. - 2500 B.C.

Type sites: Mundigak III upper
Mehargarh VI - VII
Damb Sadaat II - III
Kulli-Mehi
Nal
Rahman Dheri I
Gumla II - III
Kot Diji
Amri IC-D
Sothi
Kalibangan I

Emergence of the fortified towns

Ploughed field; Copper - bronze tools

Planned houses of standardized bricks, sun-dried and burnt.



Centralised State: Government

CITIES

BRONZE AGE: MATURE
(Harappa Stage)
2700 B.C. - 1900 B.C.

Type sites : Harappa
Mohenjodaro
Lothal
Kalibangan

Planned settlements

'Citadel'

Monumental Public Buildings

Seals & Sealings

Writing

Weights & Measures

Long distance trade

Cemeteries

Fig. 6.3. Chart showing stages of Early Cultures of South Asia : Towards Civilization.

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1.Ghar-i-Mar (Non-Ceramic and Ceramic Neolithic); 2. Ghar-I-Asp (same as above) and 3. Dara-i-Kur (Goat Cult Neolithic). The cultural sequence is as follows:

(i) Non-Ceramic Neolithic A & B,
(ii) Ceramic Neolithic,
(iii) Goat Cult Neolithic.

The Aceramic levels have yielded two dates: 8566 and 6960 B.C. while the Ceramic Neolithic levels have yielded 5214 B.C., 5018 B.C. and 4549 B.C. dates. From what we know of the chronologies of similar complexes (Aceramic and Ceramic Neolithic) in West Asian sites and at Mehargarh, these dates are in perfect conformity. The evidence of domesticated sheep, goat and cattle around 8566 B.C. is plausible on all counts. The association of polished bone points, plain and decorated needles, awls and spatulas along with lithic tools like sickle blades, polished celts, querns and pestles in the Aceramic and Ceramic Neolithic deposits is also in conformity with the West Asian and Indian examples. Unfortunately, botanical evidence has not been recorded or worked out so far. However, handmade pottery has been found. The presence of a few steatite bowl fragments in the Ceramic Neolithic levels also conforms with the Mehargarh evidence of long distance exchange or trade. *Fig. 6.2*

The 'Goat Cult Neolithic' dated largely to second millennium B.C. (2190 and 1880 B.C.), goes more with the Kashmir Neolithic than with the West Asiatic or Mehargarh Neolithic.

The picture that emerges from the above discussion is extremely significant. It shows the following features. *Fig. 6.3*

The first phase of change from hostility towards intimate relationship in the biosphere, i.e. man-land-fauna-flora relationship, occurred in the Epipalaeolithic times when man selected the domesticable fauna and flora and started living in semi-sedentary fashion.

The second phase of this change occurred in the increased selection of these domesticates and establishment of sedentary settlements in large numbers. This is generally called Neolithic and is the starting point of civilization. It is firmly evidenced at Mehargarh. In social terms it was coming together of a few nuclear families for purposes of helping each other in food production. It was possibly a loose association forced by the in-built factors of agricultural pursuit.

**India**

The pre-Ceramic Neolithic settlements are found elsewhere also. At Kile Gul Mohammad in Quetta region the earliest settlement was of this kind but its date was not placed earlier than 4000 B.C. (Fairservis 1971). In the Kashmir Valley, at Gufkral, there is again the pre-Ceramic Neolithic deposit but that also is dated only to third millennium (Sharma 1982). This evidence poses many problems but the fact remains that in South Asia the pre-Ceramic Neolithic phase occurred at different places and in different times, possibly as independent happenings. In other words, the first stage of intimate social and sedentary culture formation in India is not unicentric and diffusionist model of neolithic expansion in South Asia from northern regions of West Asia, as was once visualized by Braidwood (1960) and reiterated by Fairservis (1971) and also accepted by Subbarao (1958), is no more tenable. The Neolithic way of life was an entirely local development of South Asia and it evolved variously at various places and at various times. *Fig. 6.4* *Fig. 6.5*

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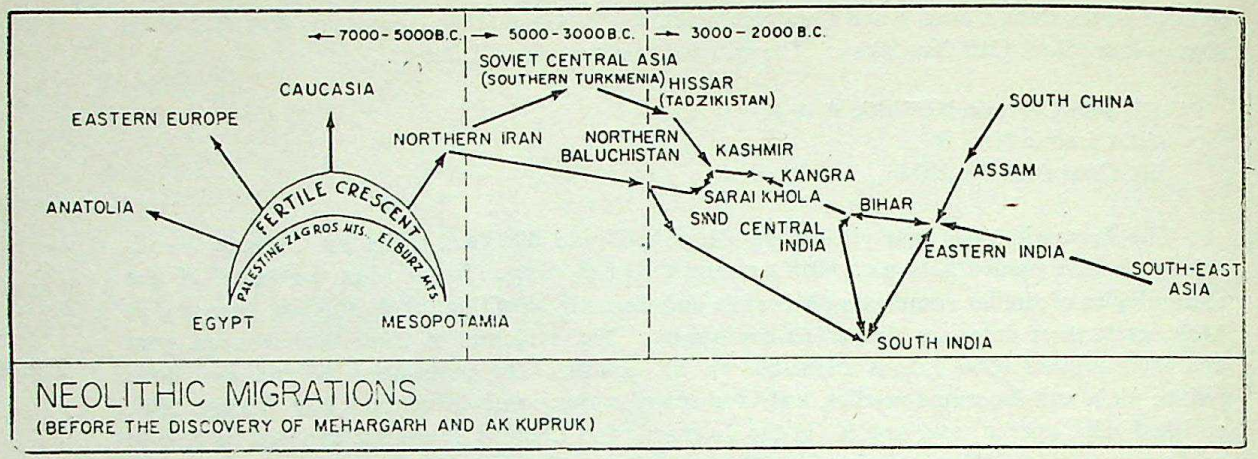


Fig. 6.4. Neolithic Migrations.

Change towards social and cultural growth of various degrees of complexity can be both due to acculturation and also independent of this process. While in the former situation a 'higher' culture suddenly overpowers the 'lower' culture, in terms of material achievements, which can easily be made out by counting elements, the latter situation admits only marginal cultural contact with other cultures, usually those flourishing in the neighbourhood, higher or lower, or both. This is called internal growth. The introduction of ceramics in a pre-Ceramic village, like Mehargarh, admits the latter model of understanding since the examples of cermics from the early levels of Ceramic Neolithic are handmade and crude and not developed in technique and typology. In other words, we have at Mehargarh an autochthonously developing culture-complex. These developed cultures are not the products of acculturation. In social terms, what was once only a loose association of some nuclear families now turned into a group of people who belonged to extended families with closer ties than hitherto.

*Fig. 6.3*

**From Neolithic to Chalcolithic in South Asia: Evidence of Local Change and Development**

By the beginning of the fourth millennium not only West Asia but also South Asia was humming with activities in enlarged villages. In the whole of Baluchistan, along with lithic tools, copper was frequently used. These chalcolithic villages, with a variety of wheel-turned plain and painted potteries, entered into close networks of cultural and economic interactions with neighbouring countries such as eastern Iran, Afghanistan and Soviet Central Asia. Such a situation was not the over-night creation of a few people. As noted earlier, it was the result of a developing process from the eighth-seventh millennium. The interaction sphere was slowly and gradually expanding both in contents and space. Even in intensity the interaction was becoming ing closer and deeper in every following century. The whole of the fourth millennium, therefore witnessed unprecedented cultural cross-currents and population expansion from the Oxus to the Indus. Those who crossed the Indus and colonized the Indo-Gangetic Divide in this millennium were only a few and far between but they had hit upon the golden treasure of fertile lands where wheat and barley could be grown effortlessly and in abundance. They seem to have come in batches through three to four different routes during the last

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decades of the fourth millennium. They established their small settlements in the Potwar region, in the Ravi and the Ghaggar or Saraswati, and in lower Sind, etc. In social terms, we have here tribal characteristics: the society was perhaps based mainly upon kinship system. Each tribe prided in its exclusive pottery. Each tribe expanding in time and space but keeping

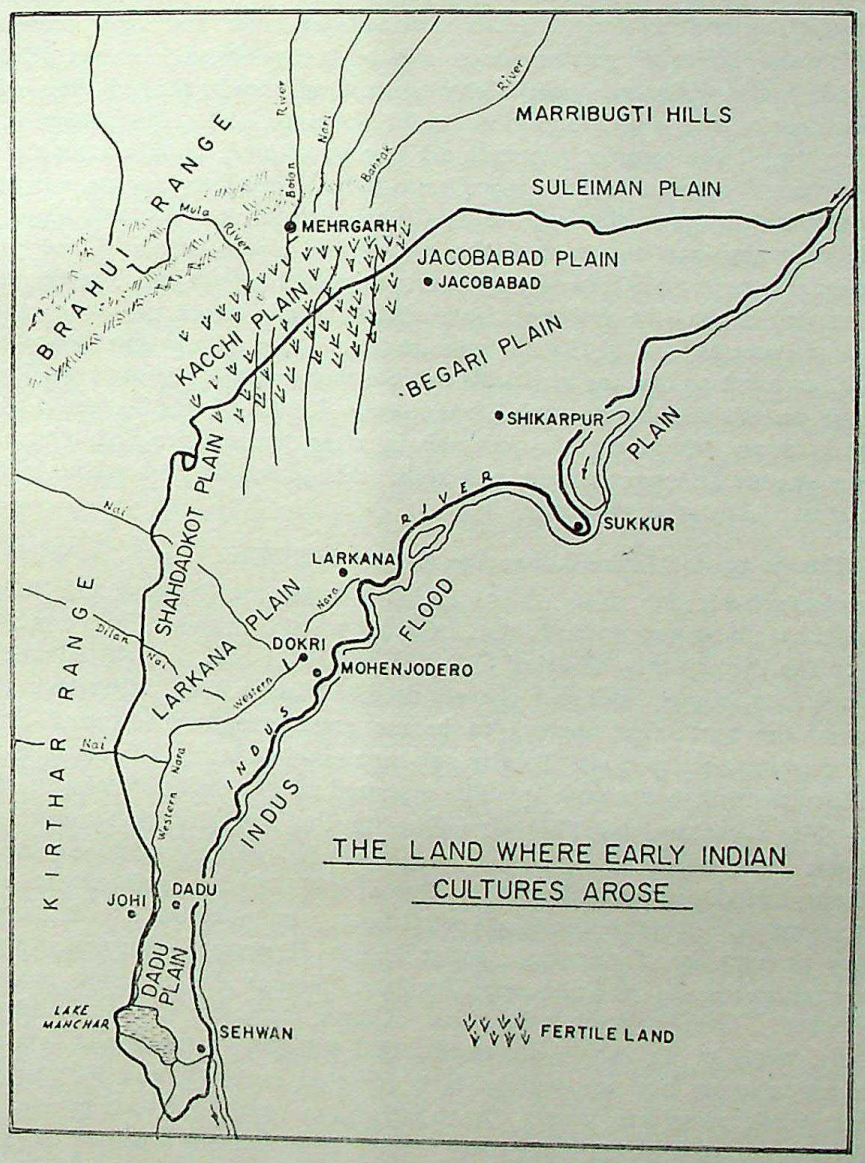


Fig. 6.5. The land where early Indian cultures arose.

its cultural identity intact. Social stratification was still not based excusively on professionalism. Search for better land was still on—first within its own hilly locale, and then outside, in the piedmont and the river valleys.

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*Fig. 6.3*

**From Chalcolithic to Early Bronze Age: Evidence of Local Development in South Asia.**

With the obvious lowland advantages, the first settlements on the Indus and Saraswati soon grew into towns, well fortified and reasonably planned, using bricks, both sun-dried and fired, the latter only occasionally. The trade net-work of the fourth millennium was taken advantage of and the hills on the west kept on supplying the much needed metals and minerals.

Towns have the tendency to grow faster than villages since first they achieve corporate character of social life with greater compulsive authority vested in a chosen few, and then they tend to free the professional people from agricultural persuits through their redistribution systems. In other words, state formation begins and some kind of government is also born. Simple society turned into complex ones with a hierarchy of professional classes in which lies the germs of 'caste' system, so very peculiar to India. Efficiency in state management now becomes both a craft and art. Most probably religious institutions also started playing their role in consolidating professional classes on the basis of moral codes—personal and professional. These social and cultural changes inevitably lead to all round growth and diversity, occasionally reflected in material items. In certain examples and at certain times the pace of growth in material culture becomes so fast that the appearance of these cultural items look 'sudden' and 'catastrophic', so much so that we are unable to trace their evolutionay stages within the society, and look for outside agencies for their introduction. Kot Diji I, Kalibangan I, Banawali I, etc. are such towns which explain our thesis in clear terms since just after the natural calamities the mature Harappan culture with seals, sealings, writing and weights and measures of steatite start at Harappa and other places.

*Fig. 6.3*

**From Early Bronze Age to Mature Bronze Age: Enigmatic Evidence**

The road to urbanization, thus firmly laid in different townships of the Indo-Gangetic Divide, should have been now onwards absolutely smooth till it reached the formation of the Indus cities. The Evolutionary Model of Culture Growth does not normally admit catastrophic and 'all of a sudden' changes, still such changes do take place without disturbing the general smoothness of the road, that appears to be one great lesson that we learn from the Indian examples of even historical periods. To give only one example in the 3rd century B.C. Mauryan art and architecture with monumental qualities appeared all of a sudden, then in a sense quickly vanished within a century, but the succeeding Sungan art and architecture retained all its basic contents. The Indus cities, on all counts—social, cultural and economic—were the logical outcome of Indus towns, although, as Gupta (1975-76) has pointed out a long time ago, some catastrophic events occurred at several Indus towns before the Indus cities were formed (not at every site, for example, not at Balu in Haryana) — burning at Kot Diji and Gumla, tectonic movement at Kalibangan, floods at Harappa, etc. are well recorded events to be overlooked. Then begin the Indus cities. Gupta feels that it was in times of such general crisis, affecting the whole settlement, that new social leadership is born and the so-called 'sudden' changes and innovations take place in material items, including script and monumental public structures, largely due to the personal efforts of these people. It appears to be largely true but so long the Indus script remains undeciphered it is hard to prove it. As historians and archaeologists, we all know that although with social changes, cultural changes do take place yet it is not always easy to infer social changes through the changes occurring in cultural items; at best some broad inference can be drawn from monumental stuctures. However, there also a great caution is required. To quote an example, the so-called 'citadels' at Indus cities were taken to be the seats of governments but B.B. Lal (1981) has now conclusively

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proved that at least at Kalibangan it was not at all so; it was possibly the place where collective religious ceremonies were held around the 'fire altars'. In other words, underlying the mature Indus Civilization or Harappan Culture, there was a great deal of social change, all of which is not easy to comprehend but without which the cities would not have emerged on the Indus plains. Social changes and cultural changes keep on interplaying variously at various levels (Gupta 1974).

**Our Approach to the Problems of Indus Origin**

In the ultimate analysis we come to the conclusion that it is not true that the first chapter of the Indus Civilization is missing. It is very much there, only its language is slightly different from the rest of the chapters, and has, therefore, to be read with the help of social processual expertise and not exclusively by cultural historical parameters of stratigraphic archaeology, although at some stage their happy combination must be sought. M.R. Mughal's (1970) thesis on the Early Harappan is the one work which takes into consideration this kind of approach, labelled 'anthropological approach'. We agree with him in his basic approach and subscribe to the view that the Kot Diji-Sothi complex may have eventually given birth to what is called the Mature Harappa complex. However, we would like to wait a little more and see what future excavations of sites containing Kot Diji-Sothi complex and the Indus complex on the Indus and the Saraswati have to say on the problem of stratigraphic break between the two complexes. This problem cannot completely be brushed aside by stratigraphists for one very good reason—after the stratigraphic break there has not been only quantitative differences in antiquities between the pre-break and post-break levels, there has been distinct qualitative differences too. *Fig. 6.6*

**The Polemics of Social Change vis-a-vis Technological Change**

This brings us to yet another very interesting point of discussion : what really brings about urbanization—social changes or technological changes? In other words, how far it is true to say that the phenomenal development in copper-bronze technology was primarily responsible for the birth of urbanization in the Indus Valley?

The answer is very clear. There is no direct relationship between the growth of technology, like metallurgy, and the birth of urbanization. In Indian archaeology, at least one more instance proves our observation conclusively. During the Megalithic period, of early first millennium, B.C., the iron technology was at its highest peak (Gupta 1972 : 184-240 fig. 30) when settled agriculturists were producing more than a hundred types of tools and weapons and pots and pans, some of them appear to be of steel even, but what to say of cities, even small towns did not appear anywhere; people lived just in small villages, tilling their land with ploughs, watering their fields with the system of tank irrigation and moving about on horse-back.

In Thailand, we have a similar situation—the bronze technology developed in the third millennium but not urban centres. There are many such examples, in Eastern Europe; in Bulgaria, Romania and Yugoslavia exactly the same situation existed in the fourth and third millennia (Renfrew 1979).

These examples clearly show that higher technology may accelerate the process of change leading to urbanization, in itself it cannot trigger urbanization which is essentially a multifaceted pattern of corporate life in which trade and commerce in non-essentials of life plays the most important part. In other words, in urbanization, social changes are more important

# CONTINUITY & CHANGE IN CULTURE

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## (EARLY HARAPPAN & MATURE HARAPPAN)

| | | KOT DIJI-SOTHI COMPLEX (EARLY HARAPPAN) | INDUS CIVILIZATION (MATURE HARAPPAN) |
|---|---|---|---|
| ARCHITECTURE | FORTIFICATION | ✓ | ✓ |
| | FORTIFICATION WITH BASTIONS | ? | ✓ |
| | CITADEL | ? | ✓ |
| | PLANNED CITIES | ? | ✓ |
| | CEMETERY | ? | ✓ |
| | CIVIC ARCHITECTURE | ? | ✓ |
| | | | |
| RELIGION | MOTHER GODDESS FIGURINES | ? | ✓ |
| | FIRE ALTARS | ? | ✓ |
| | | | |
| ART | STONE SCULPTURES | ? | ✓ |
| | BRONZE SCULPTURES | ? | ✓ |
| | | | |
| POTTERY MOTIFS | INTERSECTING CIRCLES | ✓ | ✓ |
| | FISH SCALE | ✓ | ✓ |
| | FISH | ✓ | ✓ |
| | PIPAL LEAF | ✓ | ✓ |
| | | | |
| TERRACOTTAS | CART FRAMES | ✓ | ✓ |
| | CART WHEEL | ✓ | ✓ |
| | CAKES | ✓ | ✓ |
| | BANGLES | ✓ | ✓ |
| | ANIMAL FIGURINES HORSE | ? | ✓ |
| | HUMAN FIGURINES | ✓ | ✓ |
| | | | |
| SEMI PRECIOUS STONES | TURQUOISE | ✓ | ✓ |
| | LAPIS LAZULI | ✓ | ✓ |
| | CORNELIAN | ✓ | ✓ |
| | SHELL | ✓ | ✓ |
| | IVORY | ✓ | ✓ |
| | STONE DRILLS | ✓ | ✓ |
| | | | |
| COPPER BRONZE TECHNOLOGY | LOST WAX PROCESS | ? | ✓ |
| | CRUCIBLES | ✓ | ✓ |
| | FLAT IMPLEMENTS | ✓ | ✓ |
| | | | |
| OTHER ITEMS | GRAFFITI MARKS | ✓ | ✓ |
| | WRITING | ? | ✓ |
| | INSCRIBED SEALS & SEALING | ? | ✓ |
| | WEIGHT & MEASURES | ? | ✓ |
| | TRADE WITH MESOPOTAMIA | ? | ✓ |

Fig 6.6. Continuity & Change in Culture (Early Harappan and Mature Harappan).

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than technological changes. In the field of economic growth, which is an essential aspect of urbanization, exchange of goods is more important than the innovations like metallurgy.

Looking from this point of view, the road to urbanization was firmly laid in the townships of Kot Diji-Sothi culture although the travellers on this road had to face a big bump before they reached the mature Indus cities. The bump of burning the township of Kot Diji or the earthquake destroying the settlement of Kalibangan is still little understood: how qualitative change occurred after a catastrophe?

**At the End**

At the end, one thing is more. Although the culture immediately preceding the Indus Civilization was Kot Diji-Sothi yet Kot Diji-Sothi itself had a long history of preceding cultures, neatly overlapping with each other. In other words, from seventh millennium to the middle of third millennium we have a continuous history of social and cultural evolution in north-western India; the birth of the mature Harappan culture or the Indus civilization in the third millennium was, therefore, absolutely logical and not at all abrupt. It grew locally and not brought from outside. This is what our studies have tried to show in this book.

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## *Appendix I*

# MEHARGARH CULTURAL SEQUENCE

*Mehargarh I* : Aceramic Neolithic settlement—7th Millennium B.C., Area MR 3. Mud-brick Structures; Graves—flexed and extended human burials; Clay figurines—human and animals; Agriculture—wheat, barley, jujube; Domestication of animals—sheep, goat and cattle; Beads—turquoise, lapis lazuli, shell, one copper bead; Lithic artefacts microliths and polished axes.

*Mehargarh II* : Ceramic Neolithic settlement—5th Millennium B.C. Area MR 4. Elaborate structures; Granary. Handmade and wheel-turned wares painted with geometric motifs; straw tempered handmade ware; Human figurines; Bead work—specialized crafts-workshop, flint drills; Copper ring, copper bead, Lapis lazuli, turquoise, shell beads; Lithic artefacts—sickle; Agriculture-addition to cotton.

*Mehargarh III* : Early Chalcolithic settlement—First half of the 4th Millennium B.C. Area MR 2. Compartmented structures—larger and more elaborate. Technological innovtions—introduction of metallurgy, crucibles with molten metal, first appearance of double spiral headed pin. Pottery—wheel-turned wares with painted caprids, birds and geometrical motifs. Figurines. Development of craft—jasper drill-bits, use of lapis, turquoise, carnelian. Agriculture—two new bread wheats, oats.

*Mehargarh IV* : Advanced Chalcolithic settlement—Middle of the 4th Millennium B.C. Area MR I. Elaborate structures. Technological development. Ceramics—wheel turned potteries with monochrome and polychrome geometric decorations, Togau ware. Terracotta female figurines. Amulet. First appearance of stamp seals, bone seal.

*Mehargarh V* : Transition—3rd quarter of the 4th Millennium B.C. Area MR I. Potteries—paintings with white pigment, monochrome potteries with geometric motifs. Human figurines. First appearance of grey ware. Togau D Ware.

*Mehargarh VI* : Early Bronze Age settlement (towns)—End of 4th Millennium B.C. and beginning of the 3rd Millennium B.C. Elaborate structures. Production of pottery in Area MR I on mass scale. Pottery—regional distribution. Ceramics—Black-on-grey ware, Quetta ware, Nal polychrome ware, red ware with painted leaves. Compartmented stamp seals, use of lapis lazuli, turquoise, copper, etc. Agriculture—addition of wine grape.

*Mehargarh VII* : Advanced Bronze Age settlement (cities)—Middle of the third millennium B.C. Area MRI. Monumental platform. Pottery—Black-on-grey ware, Late Quetta style, a few Kot Dijian style pot-sherds. Mass production of male and female figurines, Zhob Mothergoddess. Zebu figure. Terracotta cakes. Copper objects—double spiral headed pin. Alabaster ram, lapis, turquoise, stamp seals.

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*Appendix II*

# GANGA-VINDHYAN COMPLEX—A NEW FACTOR IN THE PRE-HARAPPAN CULTURES OF INDIA

THE process of neolithic evolution in the history of India started in the seventh-sixth millennium in Baluchistan and Ganga Valley, almost simultaneously, though independent of each other. Both the areas witnessed the transitional phases: from the Mesolithic to the Neolithic. In Baluchistan the beginning is marked by the Aceramic Neolithic phase—people living in multi-roomed structures, domesticating cattle, goat and sheep, practising agriculture and using the distantly found raw materials like lapis lazuli, turquoise, etc. and believing in mother-goddess cult. However, in the Ganga valley-Vindhyan plateau, the Aceramic Neolithic phase has so far not come to light; pottery was known to the people since the Mesolithic period, and, therefore, found its way in abundance in the Neolithic complex. However, other crafts which mark Baluchistan's early neolithic did not develop in this region till the late chalcolithic stage. However, the basic character of both the cultures has been the same: settled villages with huts, cultivation of plants and domestication of animals.

Here we are faced with a problem : how Baluchi Neolithic developed to the extent where it could contribute to the growth of the Bronze Age Civilization of the Indus Valley while the Ganga Valley neolithic did not develop to that extent? The answer possibly lies in the nature of their location and the line of development. Baluchi cultures were always exposed to the developed West Asian cultures due to their geographical proximity and that exposure contributed substantially to the process of their development, while the cultures emerged and developed in the Ganga valley—Vindhyan plateau in relative isolation. However, two phenomenae have been attested to by these discoveries: first, that in favourable environment human beings developed everywhere practically in the same manner, remaining completely unaware of each other—settled way of life, emergence of family unit, multi-room or multi-hut structures, domestication of plants and animals; second, that changes towards urbanism came about by the interaction of a lower culture with the higher cultures existing in near by regions. This confirms the view that instead of one there were two nuclear zones of early neolithic in India although the directional changes in their history have been different.

**The Research**

The Allahabad University Expedition explored the Vindhyan Plateau and the Ganga valley and excavated a few sites such as Chopani-Mando, Mahagara, and Koldihwa to understand the nature of Neolithism in Uttar Pradesh. It has now been well established that this region was inhabited right from the Epi-palaeolithic times through the Mesolithic to the Neolithic. Dam Dama, Distt. Pratapgarh, also proves it.

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The Vindhyan plateau spreads over the southern parts of Uttar Pradesh and the northern parts of Madhya Pradesh. It is bound on the north by the Ganga valley and on the south by the river Son. In this area, the banks of the river Belan and the Ganga valley have yielded sites with considerable habitational deposits. The Kaimur ranges have good quartzite beds, as well as chert, chalcedony, agate, carnelian, jasper, quartz and other fine grained rocks and also domesticable and wild animals. The perennial sources of water, the Belan, the Son, etc., and the thick forests served as natural habitat for various wild animals and plants, and the rich supply of raw materials had sustained the human population in this area for a long time.

The climate of this region is marked by a long and hot summer, a fairly pleasant monsoon and a cold season. The mean annual rain fall of the area is 965 to 1000 mm. About 88% of the annual rainfall is received during the monsoon. The mean daily minimum (winter) and maximum (summer) temperature of the region are 23.7°C (74.7°F) and 41.8°C (107.2°F), respectively.

The Vindhyas and the Ganga valley attest to the growth of human population and the movement of people during the Epi-palaeolithic and Mesolithic times as a number of settlements of these periods have been reported in this region. Climatic changes, growing aridity, availability of the water, grass and acquatic plants and animalss in the Ganga valley provided stimulus for movement both for the animals and men. Hunters also followed the track of wild animals from the Vindhyas to the Ganga valley. Excavations at Chopani-Mando (Sharma & Mishra 1980), Mahagara and Koldihwa in the Vindhyas (Sharma & Mandal 1980) and Sarai Nahar Rai and Mahadaha in the Ganga valley, attest this phenomenon. More than a hundred settlements, ranging in time from the Epi-palaeolithic to the Mesolithic, have been brought to light in the region between Pratapgarh and Varanasi. The material collected from the sites in the Ganga valley, Districts Pratapgarh, Allahabad, parts of Jaunpur, Sultanpur and Varanasi attest the beginning of 'the great exodus' as if, from the Vindhyas to the Ganga valley in the Epi-palaeolithic times. The first half of the Mesolithic saw the maximum intensity of migration and the second half witnessed the gradual decline of these migrations. Of 198 sites, 5 belong to the Epi-palaeolithic, 172 to the first part of the Mesolithic or Mesolithic II A, and only 21 to the second half of the Mesolithic or Mesolithic II B (Sharma and Mandal 1980: 7-8).

The migrated human folks from the Vindhyas occupied the banks of the lakes formed out of the meanders in the abandoned channels of the Ganga. The location of Sarai Nahar Rai and Mahadaha confirms the fact that besides the food resources, the material security measures were also the deciding factor for the selection of the settlement. Both these sites are surrounded on all sides by lakes, the access to them was only through a narrow strip of land. G.R. Sharma (1980 : 9), the Director of Excavation, feels that the migration appears to be seasonal and none of the sites is occupied for a long time continuously. The same site was selected again and again. Probably these folks used to reach the Ganga Valley during the summer in search of food when there might be acute shortage of food and water in the Vindhyas and probably in winter they went back to their original habitat. R.K. Verma, the excavator, however, feels that the seasonal migration theory is based not on archaeological facts but on sheer conceptual models, and to our mind he is correct.

The type site of the Vindhyas is Chopani Mando, situated on the last terrace of the Belan, at a distance of 77 km south-east of Allahabad. It yielded a long sequence of cultures and it covers an area of 15,000 sq.m. 150 m east-west and 100 m north and south (*IAR* 1966-67 : 38; Sharma & Mishra 1980: 36-37).

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I. Epi-palaeolithic, medium-sized blade tools
IIA. Early Mesolithic or Non-Geometric Microliths
IIB. Early Mesolithic or Geometric Microliths
III. Advanced Mesolithic or Proto-Neolithic: layers 3 to 1 belong to the Advanced Mesolithic or Proto-Neolithic Phase. Handmade pottery emerged in this phase for the first time.

As there are no radiocarbon dates for Chopani-Mando or for any other Vindhyan site, the relative dating alone is possible. The Belan has two radiocarbon dates for the Upper Palaeolithic, just antedating Epi-palaeolithic—23,840 B.C. (PRL. 86) and 17,765 B.C. (TF. 1245). The material from Chopani-Mando phase IIB is identical to Sarai Nahar Rai mesolithic of the Ganga Valley. So far only one radiocarbon date is available for Sarai Nahar Rai: 8365±110 B.C. (TF. 1104).

On these pieces of evidence, the Epi-palaeolithic, the Early Mesolithic and the Advanced Mesolithic may tentatively be placed within the bracket of seventeenth to the seventh millennium B.C. (Sharma & Mandal 1980: 72).

Here the scope of study is limited to the Neolithic cultures of the Ganga Valley and the Vindhyas. However, to understand the dynamics of the Neolithic cultures, the nature of the Mesolithic, particularly the Advanced Mesolithic, a transitional phase between these two, should be fairly known to us.

Chopani-Mando provides a fair idea up to the Advanced Mesolithic. However, the Neolithic phase is absent here. But another site in Vindhyan region, known as Mahagara, took forward this sequence and yielded the Neolithic habitation. The continuity from the Mesolithic to the Neolithic is evidenced here. A few tool types exhibit their continuous use right from the Epi-Palaeolithic to the Neolithic times, of course, with variations in the sizes of parallel sided blades, blunted back blades, points, scrapers, lunates, burins, borers, etc. During the Epi-palaeolithic period, only chert was used for tool-making while in the succeeding phases even chalcedony, agate, carnelian, etc. were introduced in the lithic industry (Sharma and Mishra 1980: 14-16).

It is evident that the Mesolithic phase is evolved here out of the Epi-palaeolithic as it consists of some previous traits. The Mesolithic people adopted much more settled life: circular/oval huts of wattle and daub, sometimes with stone paved floors, were erected. Each hut was a complete unit of dwelling. These huts were built on wooden posts. The wall was made of reed or split bamboo and was faced with mud from both the sides. A number of tools are reported from the floors of the huts : anvils, hammer stones, ring stones, sling balls, rubber stones, mullers, etc. (Sharma & Mishra 1980: 17).

As far as the domestication of animals and plants is concerned, there is no definite evidence from the field for that in Phase II A-B. It appears that their economy was still based on hunting and gathering like the economy of their predecessors.

In the Ganga Valley, the Mesolithic folks camped in the open-air and did not build any permanent structure. However, the evidence of post-holes around an oblong community-hearth at Sarai Nahar Rai recalls the hutment of the Vindhyan area (Sharma and Mandal 1980 : 18). It is significant to note that the evidence of burials inside the settlement has been found only in the Ganga Valley. The dead were buried in extended position in shallow oblong pits with west-east orientation. Multiple burials were also known. Grave goods included microliths,

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bone ornaments and shell. All this indicates the practice of developed rituals (Sharma and Mandal 1980 : 18).

About the advanced Mesolithic we have slightly more knowledge. Several huts and hearths have been located. Ground stone industry comprised grinding stones, ring stones, anvils, hammer stones, sling balls, etc. Animal bones show the existence of cattle, sheep and goats. The rice of wild variety embedded in clay lumps suggests the collection of wild edible grains (Sharma & Mandal 1980 : 75).

The most important discovery of the phase is the invention of pottery, crude and hand-made (Sharma and Mandal 1980 : 65-67). All these evidences suggest a stage of transition from the hunting-gathering to the settled mode of life, possibly with incipient agriculture.

Transition from the advanced Mesolithic to the Neolithic is clearly documented at the sites of Mahagara and Koldihwa. The advanced Mesolithic of Chopani Mando has the common link with Mahagara and Koldihwa. The lithic industry, as mentioned earlier, included parallel-sided blades, blunted-back blades, points, scrapers, lunates, burins, borers, of Epi-palaeolithic types and notched blades, pen-knife blades, serrated blades and trapezes of the Mesolithic type and tranchet of advanced Mesolithic. They continued in the Neolithic period. However, they varied in sizes. The Neolithic man added polished celts. Querns, mullers and ring stones also connected the Advanced Mesolithic with the Neolithic. For the first time these objects were made by the advanced Mesolithic people and were adopted by the Neolithic folk with some modification in their shapes and sizes. The pottery suggests the most positive link between these two phases. Pottery was invented in the Advanced Mesolithic phase and found in abundance in the Neolithic phase at Mahagara and Koldihwa.

It is clear from the above review that from hunting-fishing stage man reached here the food producing stage and entered in the settled way of life.

**Neolithic Period**

Mahagara and Koldihwa are the excavated neolithic settlements in the Vindhyan Plateau (Sharma and Mandal 1980). The site of Koldihwa lies on the left bank of the river Belan at a distance of 85 km south-east of Allahabad, in the hilly tracts of the southern part of Meja subdivision of the Allahabad District, Uttar Pradesh. The mound, roughly rectangular in shape, measures 500 m × 200 m. Excavations (1972-76) have brought to light the remains of Neolithic, Chalcolithic and Iron Age cultures. The Neolithic material of Koldihwa is identical to the material of Mahagara. The cultural repertoire of the neolithic Koldihwa is marked by handmade pottery, ground stone implements, celts of rounded variety fashioned on basalt, neolithic blades and microlithic tools. The ceramic industry is characterized by three wares : the cord-impressed, rusticated, and the burnished ware (*IAR* 1972-73; 1974-75; 1975-76; Mishra 1977: 107-119). Domestication of plants in attested by the discovery of the cultivated variety of rice (Vishnu Mittre 1977:141).

Koldihwa has got three radiocarbon dates—6570±210 B.C; 5440±240 B.C. and 4530±185 B.C.

Systematic explorations were conducted to determine the distribution of the Neolithic Culture in the major river valleys of the northern Vindhyas. On the basis of the available information, it is clearly evident that the neolithic habitations extended upto the site of Panchoh on the Belan in the north and upto Kunjhun on the river Son in the south. These two sites form the limits of the Neolithic Culture.

The mound of Panchoh is located some 2.5 km north-west of the site of Koldihwa on the

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right bank of the Belan. It has yielded the remains of circular and oval (floors) huts, and lithic artefacts similar to Koldihwa artefacts (*IAR* 1975-76; 47; Mishra 1977: 107-119).

Kunjhun is located on the right bank of the river Son at a distance of 36 km north-east from Sidhi in Madhya Pradesh. The surface assemblage from this site makes it comparable with the other neolithic sites in the Belan valley (*IAR* 1975-76 : 27).

The most noteworthy site is Mahagara, located on the right bank of the river Belan to the west of the confluence of the old and the new channels of the river at a distance of about 85 km south-east of Allahabad city. Koldihwa and Mahagara are situated opposite each other. These neolithic sites are situated 3 km south-west of Chopani Mando where a complex sequence ranging from the Epi-palaeolithic to the Advanced Mesolithic was reported as noted earlier. Both these neolithic settlements are close to flood plains.

The mound of Mahagara is oval in form and measures about 8000 sq m. The site was excavated in 1975-77 and yielded 2.60 m thick habitational neolithic deposit divided in 17 layers. But the area of operation was extremely limited (Sharma and Mandal 1980 : 38-39).

As Mahagara is the index site for the neolithic culture in this area, a survey of its cultural milieu will help us in assessing the nature of the neolithic culture in the Vindhyan plateau.

**Structures**

Man learnt to live in permanent huts in this region during the Mesolithic times itself. However, during the neolithic phase the huts were enlarged in two or three units. For domesticated animals, cattle pen were made.

The construction of huts recalls the continuity from Chopani Mando. The huts are comprised of two to three units and that formed a house. This clearly shows that the family units emerged in the tribes. So far eight houses have been excavated. Each house comprises of two or three huts closely linked, possibly with a common passage. The huts were circular in shape and vary from 6.4 m to 4.30 m in diameter. The oval huts range from 6 m to 3.04 m on longer axis and from 4.20 m to 2.80 m on shorter axis. The maximum and minimum living area occupied by the individual hut in a house measure 32.24 sq m and 9.72 sq m, respectively. The total area covered by these huts measures 266.97 sq m. Wooden posts supported the walls which were made of reed or split bamboo, and plastered with mud from both the sides. Their burnt fragments have been found in the houses. The maximum and minimum area of the houses comprising two or three huts measure 80.16 sq. m. and 22 sq. m, respectively. None of the huts at Mahagara has offered evidence of stone pavement (Sharma and Mandal 1980 : 19-20). In all twenty huts were unearthed yielding the evidence of floors and post-holes mainly. The post-holes are reported on the periphery of the floors. The size of the hut decided the number of post-holes, normally the post-holes range from 6 to 9 in number, the diameters of which varied from 15 cm to 12 cm (Sharma and Mandal 1980 : 44).

Most of the floors have not yet been fully excavated. However, the fully excavated floors have not yet yielded any trace of paving, plastering, ramming, etc. The roof was, in all probability, circular or oval, forming a cone at the apex. The houses, in general, are built around or within a ring and not along a line. These house-units are sparsely distributed and the minimum and maximum space between two units is 12 m and 4 m, respectively. Each unit has sufficient open space on its four sides. The belongings of these huts in the form of neolithic blades, querns, mullers, rubber stones, sharpeners, sling balls, and stone and pottery

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discs, pottery assemblage (table and kitchen ware) make it clear that at least one hut in the house was used for living purposes, the rest were for the working. In each house the floor of one hut is devoid of tools or food processing equipment. However, house no. 4 has yielded the tools from all the huts (Sharma and Mandal 1980 : 19-20).

The settlement of Mahagara was also planned in a depression surrounded by a natural embankment formed by cemented gravel IV. Thus this natural bund protected the settlement from the wild animals and wind action.

The most significant discovery amongst the structures is a large cattle-pen, somewhat rectangular on plan, measuring about 12.5×7.5 m, situated at the eastern fringe of the south-eastern sector of the settlement, though surrounded by huts on all sides. The cattle-pen is enclosed by 28 post-holes, ranging in diameter from 10 cm to 15 cm. Cattle-pen has got three openings : one being at the western side and two at the eastern side. These openings were controlled by two posts on both the sides.

The identification of this enclosure as a cattle-pen is evident since a large number of ho of impressions of cattle belonging to different age groups have been located in clusters within the area (Sharma and Mandal 1980 : 46). The existence of the cattle-pen attests the fact that the animals were domesticated fully. However, we completely disagree with the interpretation of Sharma that it also shows that the cattle was 'not the family property but the community property' since all folk examples in India show that cattle is always a family property even though they may be kept in a common cattle-pen.

Unlike Baluchi cultures, pottery emerged in the Vindhyan-Ganga valley during the Mesolithic period. Chopani Mando has yielded handmade pottery, characterized by two distinct wares : ordinary red ware and brownish grey ware. The common shapes are bowls and vases but these are not standardized as yet. Several potsherds bearing impressed designs have also been noticed. Generally the motifs have been drawn from the contemporary flora and fauna. According to Sharma and others (1980 : 24), it owes its origin to the same magico-ritual tradition of which the prehistoric paintings are the most eloquent expression but to our mind it is not at all correct since while the prehistoric rock paintings are basically motivated by hunting and the concomitant magico-religious beliefs, the paintings on pots are generally motivated by certain conventions and aesthetic ideas ; hunting never played any part in it.

Potter's craft developed with the emergence of the Neolithic cultures (Sharma and Mandal 1980 : 47-62). The site of Koldihwa and Mahagara both have yielded handmade pottery though considerably advance in style ; standardized types of certain recognizable fabrics with incised decorations in abundance have marked the assemblage. The ceramic industry is marked by the following four types of ware :

| | | |
|---|---|---|
| 1. | Cord-impressed Ware | 25.86% |
| 2. | Rusticated Ware | 59.48% |
| 3. | Burnished Red Ware | 13.39% |
| 4. | Burnished Black Ware | 1.67% |

All these wares are handmade, ill-fired, and of coarse fabric, with thick to medium section, containing botanical or mineral contents used as temper. Rice husk was extensively used as tempering material for the cord-impressed and rusticated wares. The cow dung and husk were used as tempering material for the burnished wares.

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**Cord-impressed Ware**

The cord-impressed ware is characterized by the beaten-impressed decoration in the form of multi-directional striated and zigzag dotted designs executed largely on the external surface. The vessels are handmade and ill-fired and coarse in texture. The colour of vessels ranges from dull matt red to smoke grey or black which shows that it was not fired in controlled temperature. According to the excavator, the cord like designs might have been obtained by using tortoise shell (of different ages) as dabber for which the evidences have been found in excavations.

'Pottery types, simple in nature and limited in number, mainly included straight, convex and tapering deep or shallow bowls with featureless sharpened, thickened, everted and bevelled rims (55.5%), flat bowls or platters (2.9%), tubular spouted-bowls with wide mouth (0.5%) and straight concave and carinated necked jars (40.9%). The cording and rustication have been executed on jars up to the shoulder of the vessels.'

**Rusticated Ware**

'The external surface of the pots in this ware has been rusticated or roughened. This is obtained by applying the clay solution mixed with husk, straw, calcite, shell fragments, etc. on the leather hard surface. Pots are handmade, ill fired and coarse in texture. Generally, the colour of the pot is mattered with smoky grey core.

Various pot forms have been noticed. The pottery repertoir consisted of straight, tapering and convex sided deep or shallow bowls with featureless, thickened, pointed and everted rims (7.2%), platters with generally squared rims (1.2%), tubular spouted bowls (2.4%), shallow basins with tapering sides showing featureless, nail-headed and externally drooping rims (3.6%), wide mouthed *handis* with splayed out rims (1.2%) and jars with straight, concave and carinated necks (84.3%).'

The decoration in this ware was limited to incised motifs and designs only.

**Burnished Red Ware**

'In this ware, the whole external surface of the pot was applied with thick red slip sometimes dull red or chocolate also, and then the pot was burnished. Sometimes this burnishing produces lustrous effect. Bowls and basins were burnished on both the external and internal surfaces while jars were burnished only on external surface along with the internal surface of the neck portion. The pots are handmade and ill-fired. The ill-firing of these pots produces the colour from smoke grey to black. The clay used for this ware is well levigated. Pots belong to coarse and medium fabrics, both. Fine organic material and perhaps also cow-dung have been used as tempering material. Due to this the pots are porous and of light weight.

The main pottery types are convex, tapering and straight sided bowls with featureless, internally thickened, squared, flared out or everted rims (17.2%), jars of globular profile with vertical flared and sharply carinated necks with internally sharpened, everted, squared or nail-headed rims (77.5%), tapering and convex sided deep and shallow basins with internally clubbed, sharpened and nail-headed rim (3.4%) and platters with squared and rounded lips (1.7%).

Incised motifs—made of criss-cross and nail impressed designs forming rope or chain patterns—are confined to basins.'

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**Burnished Black Ware**

'The colour and fabric make this ware distinctive. The colour ranges from dark grey to jet black and the fabric is invariably medium. Black or grey colour of the pots was obtained by the use of black oxide contents in the slip. Its chemical reaction produces this colour.

The shapes of the dinning pots are straight sided deep and shallow bowls with featureless, rounded, sharpened, thickened and everted rim (57.1%), wide mouthed tubular spouted bowls (28.2%) and concave and carinated necked jars with vertical featureless and thickened rims (14.2%).

Bowls, flat bowls or platters, spouted bowls and jars are the common types in both the cord-impressed and rusticated wares. Basins and *handis* on the other hand are absent in cord impressed ware and present in rusticated ware. Basins and *handis* bearing soot marks were probably used for cooking purpose. The limited quantity of these basins and *handis* suggests the limited use of pottery for cooking purpose. Probably they preferred roasting.'

The excavations of Dao-jali Hading (Sharma 1967 ; Ghosh 1970 : 337) and Saru-Taru (Rao 1977 : 39-43) in Assam have yielded the cord-impressed ware. However, at the present state of our knowledge, it is difficult to establish any relationship between both the wares. Probably the Assamese cord-impressed ware is later than the Vindhyan cord-impressed ware.

Outside India, a similar cord impressed ware has been found at Spirit Cave (Gorman 1970 : 79-107) (sixth millennium B.C.) and Non-Nok Tha (Bayard 1970 : 109-143) (fifth millennium B.C.) in Thailand, Padahlin (Thaw 1971 : 123-133) (fifth millennium B.C.) in Burma, Gua-Kechil (Dunn 1966 :352-353) (third millennium B.C.) in Malaysia in south-east Asia ; China (Chang 1970 : 175-186) (fourth millennium B.C.), Japan (Clark 1977 : 324-128) (seventh millennium B.C.) in Far-East and further a field in Shilka Cave (Okladnikov 1994 : 112-180) (third millennium B.C.) in the Upper Amur Valley in North-East Asia. However, the efforts to establish any link amongst these various cord-impressed wares of different ages in different areas will be superfluous.

**Lithic Industry**

The excavations at Mahagara has unearthed 2052 stone objects. Of the total assemblage, tools, cores and waste constitute 13.32% (274), 2.77% (57) and 83.86% (1,721) respectively (Sharma and Mandal 1980 : 62-75).

Chalcedony was commonly used. The use of chert and agate was also popular. However, carnelian, quartz and crystal were occasionally used. All these stones are locally available in the form of river pebbles. The tools are made largely on blades and partly on flakes. The tool-types are characterized by parallel sided blades, blunted back blades, pen-knife blades, serrated blades, points: plain, tanged and bi-marginal, borers or awls, side scrapers, end scrapers and hollow scrapers, flakes with use marks, triangles, trapeze, lunates and petit-tranchet or transverse arrow-heads.

The above types may be divided in four broad groups : blades, scrapers, used flakes and points and barbs comprising lunates, triangles, trapeze and tranchet.

The neolithic people of the Vindhyas adopted the Advanced Mesolithic tool types. However, they have added a few new types : the celts, adzes and chisels. These neoliths are of small rounded variety with rectangular or ovaloid transverse cross-section, ground and polished all over the body. Celts are predominant. Mahagara, Koldihwa and Panchoh all have yielded these tools. Basalt was basically used for making all types of these neoliths while granite and quartzite were used only for celts.

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Celts constitute 88.62% of the total assemblage of neoliths. They are smaller in size, rounded in form and have bifacial working edges; the butt ends are either rounded or flat. The medial cross sections are mainly marked by two geometric forms :ovaloid and rectangular or sub-rectangular.

Adzes were not as popular as celts as they form only 9.09% of the total lithic assemblage. They are also small in size and broadly rounded in form. On longitutidinal axis, the inverse surfaces are slightly concave with levelled working edges on the same plane.

Chisel, a surface find, is elongated in form and roughly ovaloid cross-section.

Besides these lithic tools, the heavy stone objects have also been reported from these Neolithic sites. Rough to fine grained sandstone, available locally, was used for this ground industry. The excavator has grouped them under three heads (Sharma and mandal 1980 : 77-80):

1. Food Processing equipment—querns, mullers, rubbers.
2. Tool fabricators—hammer-stones, tool-sharpener.
3. Miscellaneous objects—stone balls, bored stones and stone discs.

The maximum number of stone objects, belonging to ground stone industry, are the grinding tools.

*Querns*—These are made of blocks or slabs of sandstone. They can be divided into two types :

(*a*) *Basin shaped*—This type of querns have shallow depression and they bear the rounded or concentric striation marks on the grinding facet.

(*b*) *Flat surface*—This type of querns have back and forth striation marks being indicative of rocking motion of the upper stone.

*Mullers*—They are made of chunks or pebbles of sandstone. The main shapes are oblong, rectangular and elongated. They could be grouped under two headings : unifacial and multifacial.

*Rubbers*—They are mostly made of the pebbles of sandstone and used as the upper stone in grinding operation. They are mostly irregular spherical. The working surface is broad and flat.

**Tool Fabricators**

*Hammer-stones*—Only four hammer-stones made of pebbles of sandstone have been recorded. Most of them are irregular spherical in form and have the evidence of battering marks.

*Tool sharpeners*—They are made of sandstone having one surface smooth and the other bearing the evidence for rubbing. One of the specimens has multiple parallel channels.

**Miscellaneous stone objcets**

Some other stone objects reported are stone balls, bored stone and stone discs. However, they are limited in number and their function is not very clear.

Besides these, a few other objects are also significant to note : bone arrowheads of single tanged variety, clay discs, round and oval with central perforation (some are unperforated also), clay beades of spherical shape with central perforation and a fragment of a shell pendant,

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irregular circular ring shaped with ground side and perforation.

**Flora**

The excavations have brought to light the remains of rice, jujube and bamboo at Mahagara (Sharma and Mandal 1980 : 82-84). The remains of rice comprise seeds without pericarp, impressions of caryopsis, stalk, glume and probably also spikelets. They have been found in loose forms as well as embedded in potsherds.

Koldihwa has also yielded the rice remains embedded in the potsherds of cord-impressed ware. According to the analysis, the rice belongs to the cultivated variety of rice (Vishnu Mittre 1977:141). Wild variety of rice as evidenced at Chopani Mando did exist in this area during the Advanced Mesolithic, a fact which might show that the domestication of cereals started locally.

The remains of jujube (*ber*) have been found at Koldihwa and Mahagara both. The remains of bamboo have been found in the form of charcoal and in the form of impressions on fragments of burnt daub.

**Fauna**

Neolithic levels of Mahagara and Koldihwa (Sharma and Mandal 1980:84-85) have yielded a large number of animal bones. The following animals were known to them.

Cattle (*Bos-indicus-bovidae*), sheep/goat (*Ovivignei-Capridea*), deer (*Cervidae*), horse (*Equidae*), wild boar (*Sus scrofa*), tortoise (*Chelonia*) and fish.

Sheep/goat and cattle were of domesticated variety though wild cattle also existed as attested by the animal bones. It appears that the area witnessed the transition from the wild to the domesticated one locally. The presence of cattle, sheep and goat is attested by a number of hoof-imprints in good condition on the ancient surface. The horse was also domesticated, although there is no trace of wild variety. They are, however of pony size.

The above mentioned data, related to Advanced Mesolithic and Neolithic phases, present before us the Vindhyan-Ganga valley as a nuclear zone where the technological changes in cultural evolution from the Upper of Epi-palaeolithic through the Mesolithic and finally terminating in the Neolithic are fully documented. Excavations at Chopani Mando, Koldihwa and Mahagara clearly demonstrate the transitional process from hunting-gathering way of life to food producing mode of life in this region.

Subsistence and security were the two main considerations while selecting the site for the habitation. The settlements were made near the flood plains since for the primitive agriculture of the period they provide easy solutions of the problems of cultivation.

The flood plain soil could have been used fruitfully for rice cultivation without making any special efforts. The sites were purposely selected on the bluff and the natural ridge surrounding the settlements as they have served as the protection from wild animals and floods.

The single hut system (unit) of Chopani Mando developed into multiple-huts system (unit) of Mahagara. It indicates the emergence of extended family system. The discovery of common hearth in huts suggests the same. Handmade pottery, evolved in the Advanced Mesolithic period, also developed in form and variety during the Neolithic phase at Mahagara and Koldihwa.

Domestication of plants and animals became the main stay of life. Bone of the cattle,

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sheep/goat, horse, deer, wild boar, tortoise and fish have been found in large numbers. These animals were obtained largely by close herding and partly by hunting. The wild species of all these animals have been noticed in this area. Wild animals and domesticated animals both are noticed side by side in the excavations. Domestication of animals had undergone through several stages, the last one is the close herding. The hoof-prints and the cattle-pen are the supporting evidences for the domestication of animals.

Neolithic people practised agriculture as evidenced from the discovery of rice in the excavation. Rice was a staple food. Wild rice of Chopani Mando turned into cultivated rice at Koldihwa and Mahagara. Agriculture is also attested albeit indirectly by the occurrence of querns, mullers and storage vessels. The wide flood-plains quite close to the settlements offered the suitable fertile land for agriculture.

Significantly, the Mesolithic industry continued in neolithic times along with a few new types, such as celts and adzes.

On the limited information gathered from the excavations it is difficult for us to assess their economic and social condition. However, the evidence confirms their self-sufficiency and not being exposed to the contemporary cultures. Surprisingly, the excavators have referred to a number of neolithic cultures in far off areas which have possessed an analogous pottery, the cord-impressed ware, implying thereby that they were interconnected.

As mentioned in the beginning, during this period Baluchistan was also passing through the Neolithic phase. However, the two culture-groups are poles apart in their character and they were in no way connected. Baluchi Aceramic Neolithic did not yield any pottery in the contemporary phase while the Vindhyan has it even in the so-called Mesolithic phase. Wheat and other grains appeared in Baluchistan as staple diet but rice did not exist there during this period. On the other hand, rice was used as a staple food in the Vindhyas and wheat was not known to Vindhyan people.

Similarly, while cattle predominates in Baluchistan, in the Vindhyan region sheep/goat and cattle existed with their wild species in equal numbers. Baluchi Neolithic folks had the multi-structures, made of mud-bricks but the Vindhyan people lived in huts made of mud and daub using wooden or bamboo posts. No long distance trade could be traced in the Ganga Valley as witnessed in Baluchistan, at Mehargarh.

The basic needs for life forced human beings to react in similar manner in many areas: permanent settlement, domestication of plants and animals, inventions of pottery, etc. but all areas do not produce identical culture forms. Cross-cultural currents which could reach Baluchistan gave in course of time a new dimension (chalcolithic) to the Aceramic phase while the Vindhyan Neolithic developed in relative isolation and could reach the stage of self-sufficiency only. As far as the chronology of the Ganga Vindhyan cultures is concerned the following sequence could be worked out so far, based primarily on radiocarbon dates.

| | |
|---|---|
| Upper Palaeolithic | 23,840±830 B.C.; 17,765±340 B.C.—760 B.C. |
| Mesolithic | 12,190±410 B.C.; 9,350±130 B.C.—390 B.C. |
| | 8,395±110 B.C.; 8,080± 115 B.C. |
| Neolithic | 6,570±210 B.C.: 5,440±240 B.C.; 4,530±185 B.C. |

The site of Koldihwa and Panchoh were occupied by the Neolithic man for a short span of time in the beginning but the site of Mahagara was occupied for a long period as is evidenced

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by the thickness of deposit, about 2.60 m. Mahagara is a single culture site. Neolithic deposit at Koldihwa measures 0.45 m and at Panoch only 0.65 m.

There are three radiocarbon dates from Koldihwa: (PRL 224[2])—6571±210 B.C., (PRL 103[3]) —5440±240 B.C. and (PRL 101[4])—4530±185 B.C. As the Neolithic settlement was laid on the virgin soil, these dates record the dates of the earliest neolithic habitation in this region.

Cemented Gravel IV, probably a local deposit against which the Neolithic deposits rest at Mahagara has yielded a few radiocarbon dates: 8080±115 B.C. (SUA 1421), 12190±410 B.C. (PRL 603) and 9360±130 B.C. (PRL 390, 602) and 8395±110 B.C. (TFR) but they have no direct bearing on the neolithic chronology. One can only say that as the Gravel IV equated with the last terrace of Chopani Mando in this area; the earliest Neolithic occupation is later than the ninth-eighth millennium B.C.

There are six radiocarbon dates from Mahagara but all are inconsistent. Three range from 2265 B.C. to 1400 B.C. and the other three fall around 1400 B.C. These dates are too low for this phase. The analysis reveals that these are not consistent with the corresponding stratigraphic sequence. The reliable dates can be obtained only when we excavate some of the floors of the different phases of the site.

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# *Appendix III*

## Radiocarbon Dates from Pre-Harappan Sites

| *Sites* | *Cultural Association* | *Laboratory No.* | *Radiocarbon Dates based in years* B.C. *on half life 5730±40* | *MASCA Range* |
|---|---|---|---|---|
| Amri | | | | |
| Mound A Layer 19 | Pre-Harappan | TF 863 | 2665±110 | 3540-3210 B.C. |
| Mound A Layer 28c | Pre-Harappan | TF 864 | 2900±115 | 3650-3380 B.C. |
| Balakot | Pre-Harappan | UCLA 1923A | 3406±137 | 4010 B.C. |
| | | UCLA 1923B | 3334±77 | 3940 B.C. |
| | | UCLA 1923C | 3061±82 | 3690 B.C. |
| | | UCLA 1924D | 2386±82 | 2920-2940 B.C. |
| Damb Sadaat | | | | |
| Period II | Early Bronze Age | P 522 | 2550±200 | 3380-2920 B.C. |
| Period I | Chalcolithic | L 180 B | 2320±360 | 3540-2590 B.C. |
| Period II | Early Bronze Age | L 180 C | 2220±410 | 3630-2560 B.C. |
| Period II | Early Bronze Age | L 180 E | 2220±360 | 3600-2610 B.C. |
| Period II | Early Bronze Age | P 523 | 2200±75 | 2850-2560 B.C. |
| Period I | Chalcolithic | UW 59 | 2510±70 | 3180-2970 B.C. |
| Period III | Advanced Bronze Age | UW 60 | 2200±165 | 2940-2350 B.C. |
| Deh Morasi Ghundai | Pre-Harappan | P 1493 | 2596±55 | 3330-3150 B.C. |
| | | P 2288 | 1943±240 | 2620-2070 B.C. |
| | | P 2289 | 2623±250 | 3540-2920 B.C. |
| | | P 2290 | 2263±220 | 3110-2440 B.C. |
| | | P 2291 | 2685±70 | 3380-3190 B.C. |
| | | P 2292 | 3900±300 | 4930-4330 B.C. |
| Ghar-i-Mar (Snake Cave) | Mesolithic | HV 425 | 6700 B.C. | MASCA Range not available |
| | Ceramic Neolithic | HV 428 | 5270 B.C. | |
| | Ceramic Neolithic | HV 429 | 5080 B.C. | |

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| | | | | |
|---|---|---|---|---|
| Gumla | | | | |
| Early Level of Period II | Pre-Harappan | P 1812 | 2248±74 | 2910-2600 B.C. |
| Period II | Pre-Harappan | P 1882 | 2382±151 | 2920-2940 B.C. |
| Hathala | Pre-Harappan | P 1813 | 2214±62 | 2630-2680 B.C. |
| Kalibangan I | Pre-Harappan | TF 154 | 1820±115 | 2290-2060 B.C. |
| | | TF 156 | 1900±110 | 2460-2110 B.C. |
| | | TF 165 | 1965±105 | 2540-2160 B.C. |
| | | TF 161 | 2095±105 | 2680-2210 B.C. |
| | | TF 240 | 1765±115 | 2170-2000 B.C. |
| | | TF 162 | 2105±105 | 2780-2330 B.C. |
| | | TF 241 | 2255±95 | 2940-2600 B.C. |
| | | TF 157 | 2290±120 | 2970-2610 B.C. |
| | | TF 155 | 2370±120 | 3110-2690 B.C. |
| Kile Gul Mohammad | | | | |
| Period I | Pre-Ceramic Neolithic | P 524 | 3690±85 | 4460-4330 B.C. |
| | | UW 61 | 3470±83 | 4330-4000 B.C. |
| | | L 180 A | 3510±515 | 4980-3760 B.C. |
| Kot Diji | | | | |
| Level 4 | Pre-Harappan | P 195 | 2100±140 | 2800-2190 B.C. |
| Level 5 | | P 180 | 2250±140 | 2970-2550 B.C. |
| Level 5 | | P 179 | 2330±155 | 3110-2610 B.C. |
| Level 14 | | P 196 | 2600±145 | 3380-2970 B.C. |
| Mehargarh | | | | |
| Period I | Pre ceramic Neolithie | | 11790±120 | |
| I | Pre ceramic Neolithic | | 7786±120 | |
| I | Pre ceramic Neolithic | | 6743±250 | |
| I | Pre ceramic Neolithic | | 5378±290 | |
| I | Pre ceramic Neolithic | | 5182±80 | |
| I | Pre ceramic Neolithic | | 3745±180 | |
| IIB | Ceramic Neolithic | | 5378±120 | |
| IIB | Ceramic Neolithic | | 3570±310 | |
| III | Chalcolithic | | 4745±90 | |
| Mundigak I | Neolithic | GSY 50 | 2113±150 | 2830-2190 B.C. |
| II | Chalcolithic | GSY 52 | 1634±115 | 2110-1710 B.C. |
| 1966 series III | Early Bronze Age | GSY 51 | 1135±110 | 1480-1160 B.C. |
| IV | Early Bronze Age | GSY 53 | 2361±150 | 3140-2650 B.C. |

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| | | | | | |
|---|---|---|---|---|---|
| 1973 series | I | Neolithic | TF 1129 | 3145±110 | 3880-3650 B.C. |
| | II | Neolithic | TF 1131 | 2755±105 | 3520-3210 B.C. |
| | III | Chalcolithic | TF 1132 | 2295±105 | 3720-3410 B.C. |
| Niai Buthi | | Kulli Culture | P 478 | 1900±65 | 2300-2160 B.C. |
| Nindowari Damb | | Kulli Culture | TF 862 | 2065±110 | 2480 B.C. |
| Rana Ghundai | I | Neolithic | P 2148 | 3797±60 | 4510-3350 B.C. |
| | IIIa | Bronze Age | P 2149 | 2788±60 | 3470-3350 B.C. |
| Rehman Dheri | | | | | |
| RHD | II | Early Kot Dijian | PRL 674 | 2160±160 | 2600 B.C. |
| RHD | III | Kot Dijian | PRL 673 | 2060±130 | 2480 B.C. |
| RHD | I | Pre-Kot Dijian | PRL 675 | 2580±110 | 3160 B.C. |
| RHD | I | Pre-Kot Dijian | PRL 676 | 2700±110 | 3350-3340 B.C. |
| Said Qala Tepe | I | Chalcolithic | CWRU 22 | 1779±220 | 2410-1770 B.C. |
| | II | Bronze Age | CWRU 20 | 1871±90 | 2300-2110 B.C. |
| | III | Bronze Age | CWRU 18 | 1169±220 | 2620-2110 B.C. |
| Shahr-i Sokhta | | | | | |
| II7 | | Bronze Age | P 2076 | 2335±60 | 2960-2845 B.C. |
| II6 | | Bronze Age | P 2084 | 2283±60 | 2920-2630 B.C. |
| II5 | | Bronze Age | P 2079 | 2232±70 | 2860-2590 B.C. |
| Tal-i-Iblis | | | | | |
| O | | Pre-Ceramic | P 924 | 3927±70 | 4610-4490 B.C. |
| I (Iblis) | | (Ceramic Neolithic) | P 925 | 4091±72 | 4900-4610 B.C. |
| Tepe Yahya | | | | | |
| VA | | Chalcolithic | TF 1136 | 2304±85 | 2960-2650 B.C. |
| VI | | Neolithic | TF 1139 | 2371±110 | 3110-2700 B.C. |
| IVC | | Chalcolithic | TUNC 37 | 2917±116 | 3670-3380 B.C. |
| IVC | | Chalcolithic | TUNC 38 | 2920 | 3150-2910 B.C. |
| IVB | | Bronze Age | TUNC 39 | 2025±71 | 2560-2190 B.C. |
| VIC | | Neolithic | GX 1728 | 4858±140 | 5250 B.C. |
| VIA | | Neolithic | GX 1737 | 3679±60 | 4390 B.C. |

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## ERRATA

| | *As Printed* | | *As Correct* |
|---|---|---|---|
| p. 55 | Fig. 2.11<br>Fig. 2.11A | p. 60 | Fig. 2.1I<br>Fig. 2.11A |
| p. 57 | Fig. 2.11 (Mehargarh Il Ceramic Neolithic) | p. 57 | Fig. 2.11 (Mehargarh III, Chalcolithic) |
| p. 58 | Fig. 2.11A (Mehargarh II Ceramic Neolithic) | p. 58 | Fig. 2.11A (Mehargarh III, Chalcolithic) |
| p. 113 | Pl .7 mentioned in Period II | p. 113 | Pl .7 should be mentioned in Period III |
| p. 116 | Pl .12 | p. 118 | Pl .12 |
| p. 142 | Pl .19 | p. 144 | Pl .19 |

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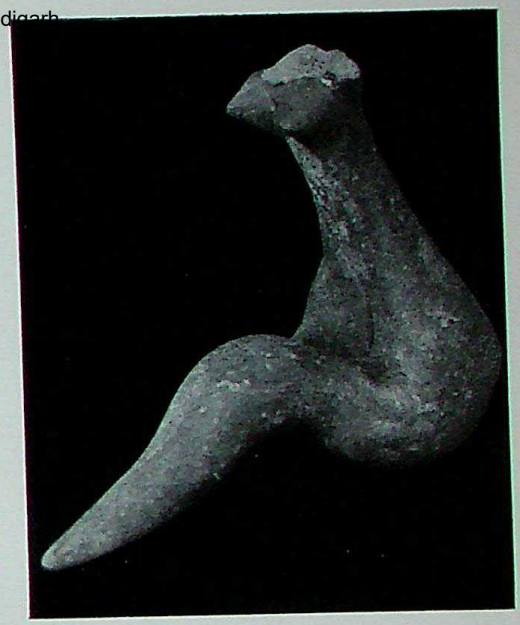

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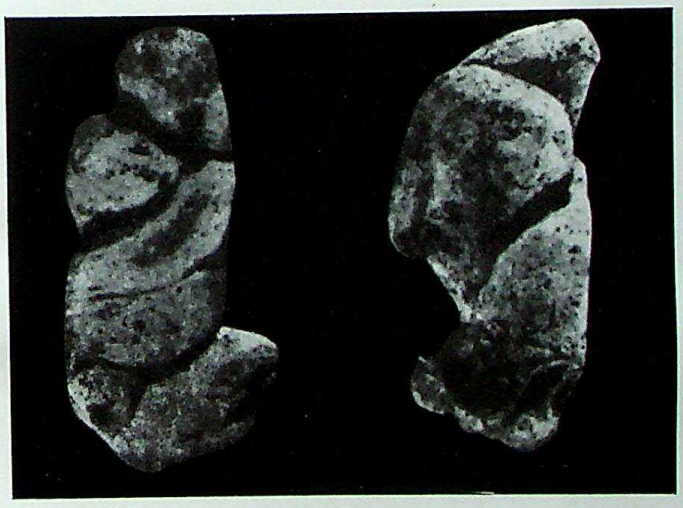

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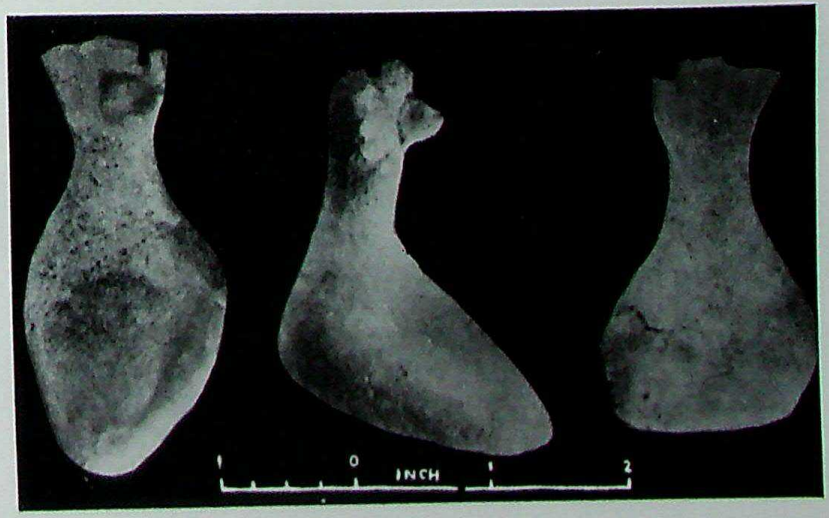


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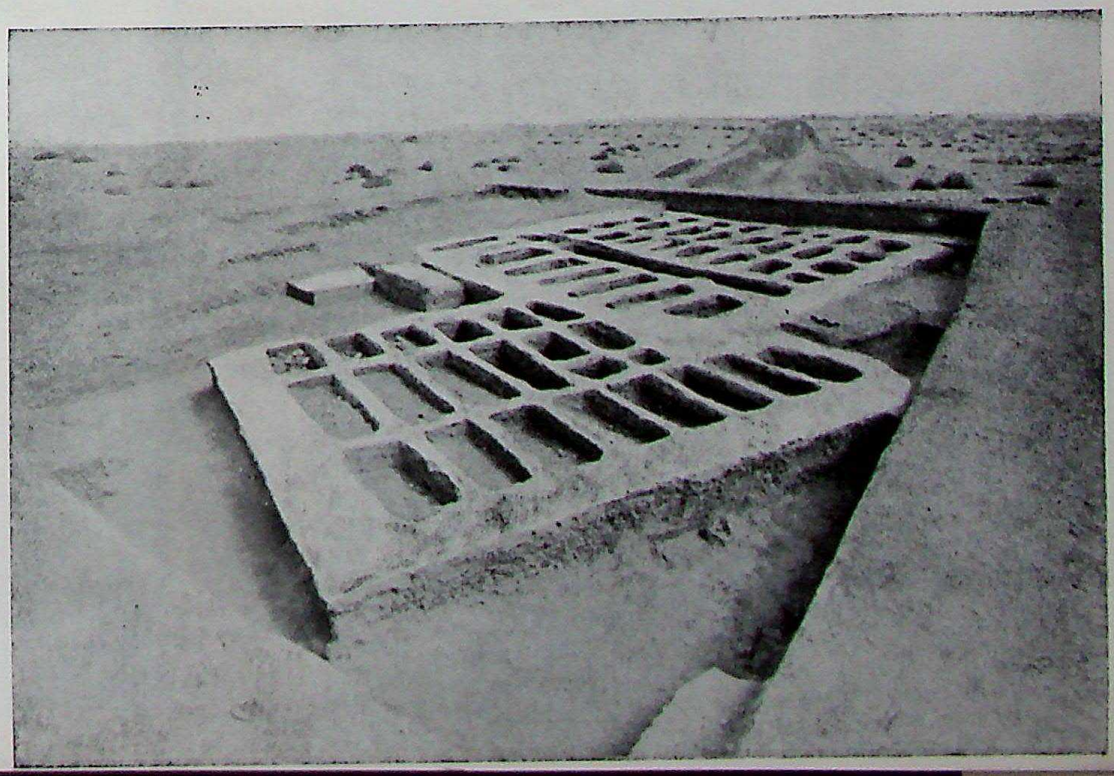

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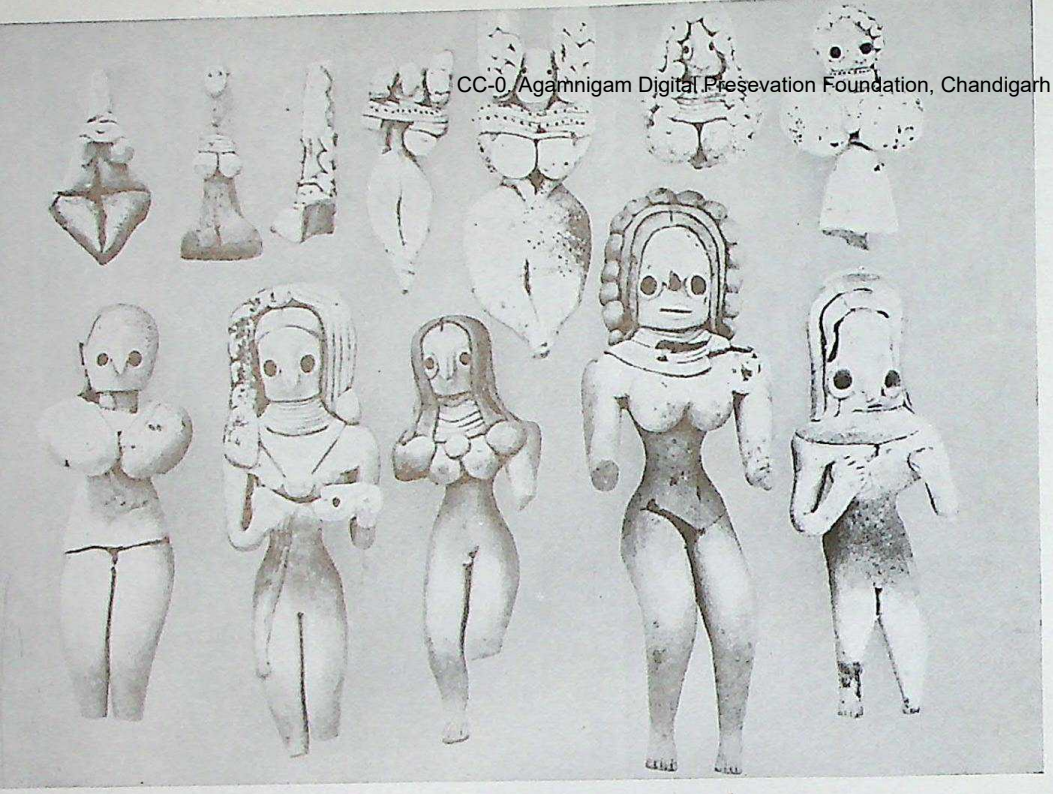

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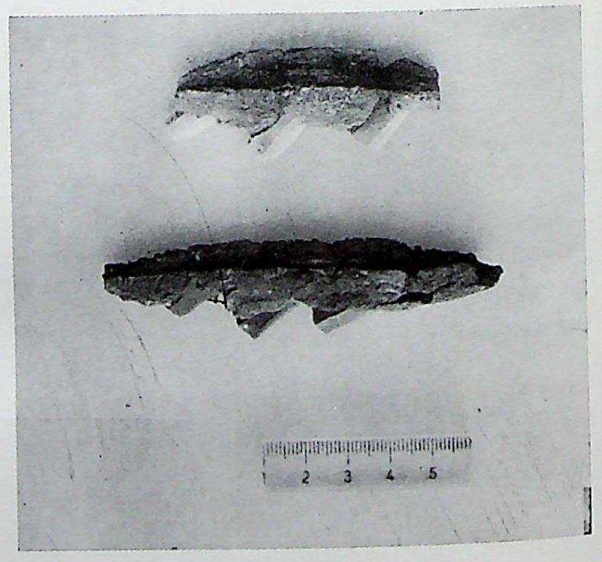


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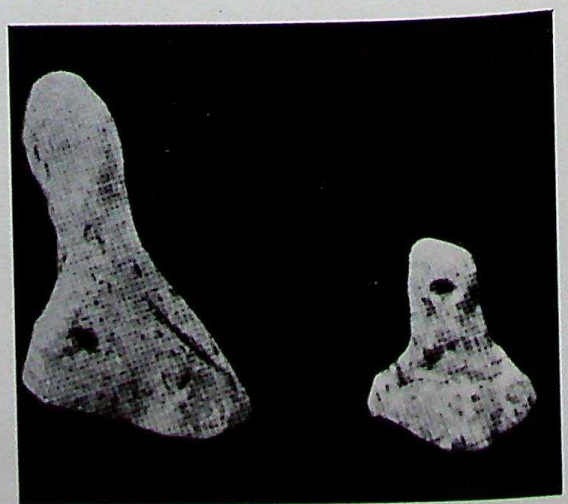

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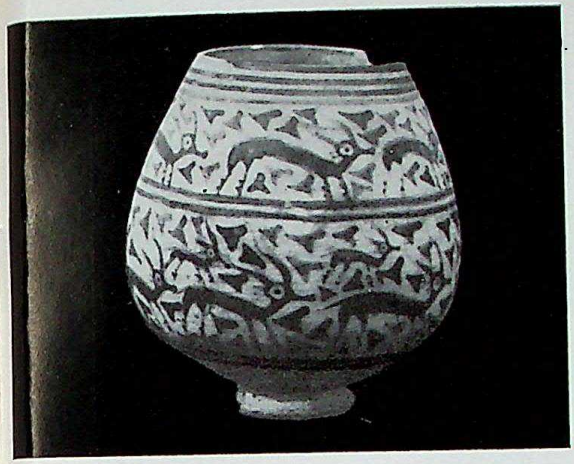

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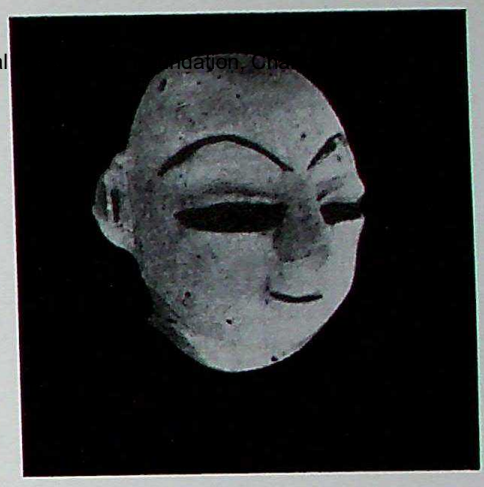

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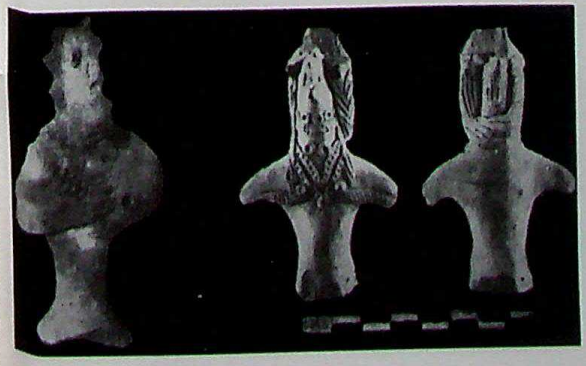

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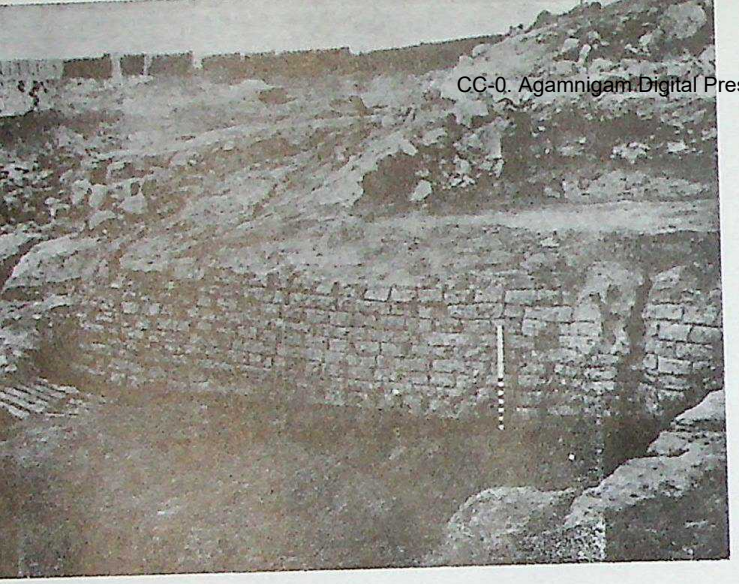

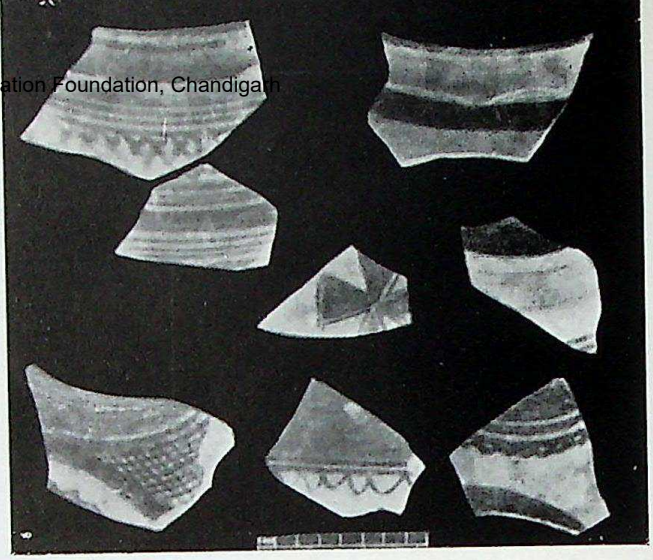

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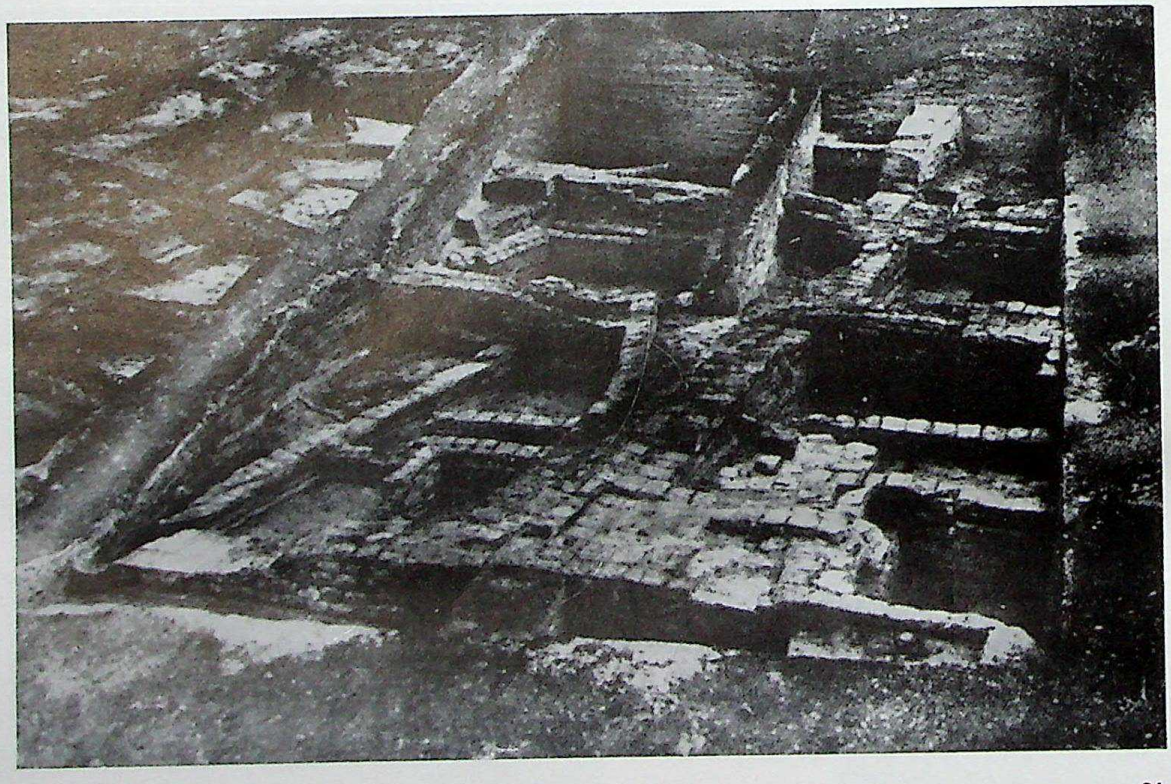

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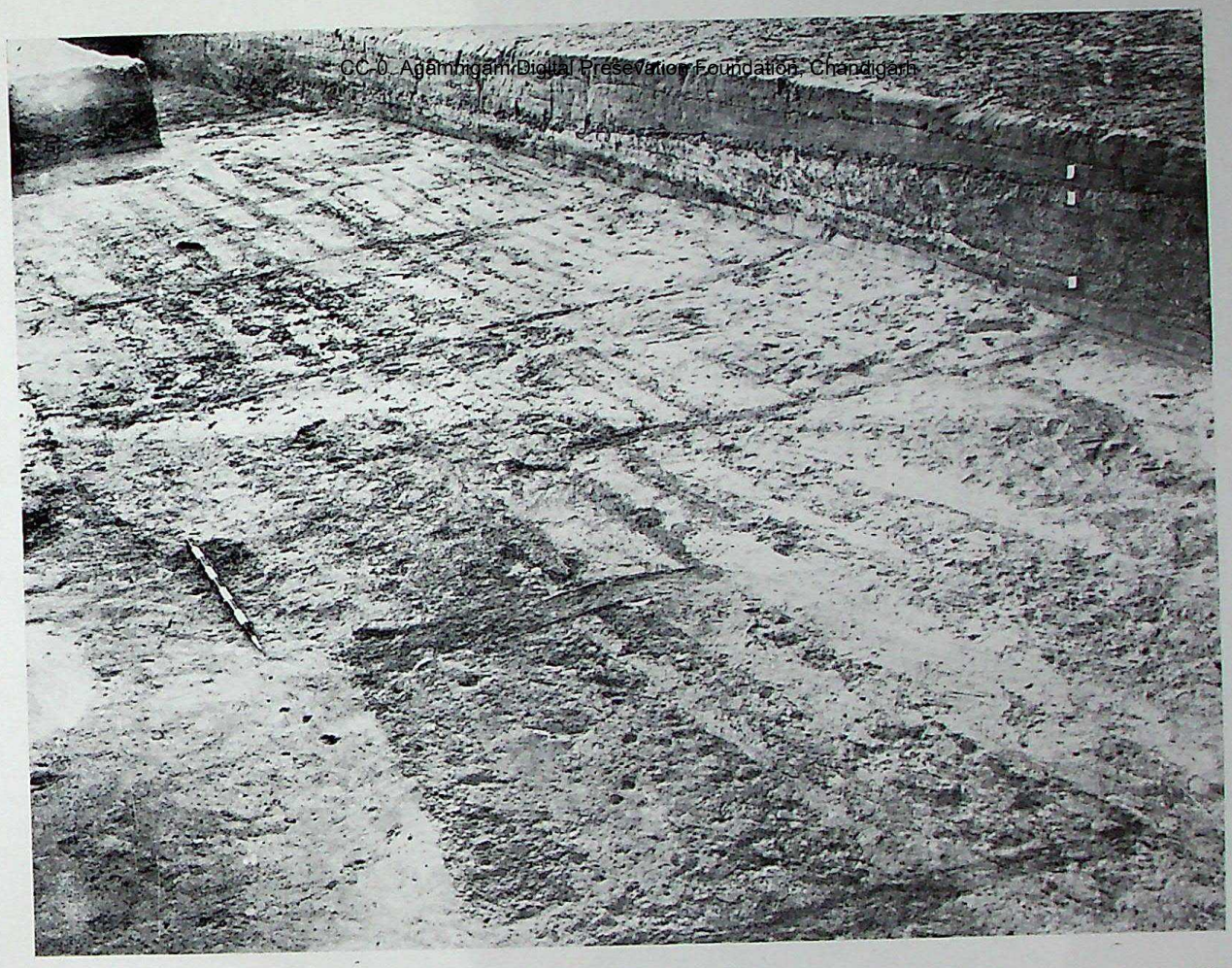

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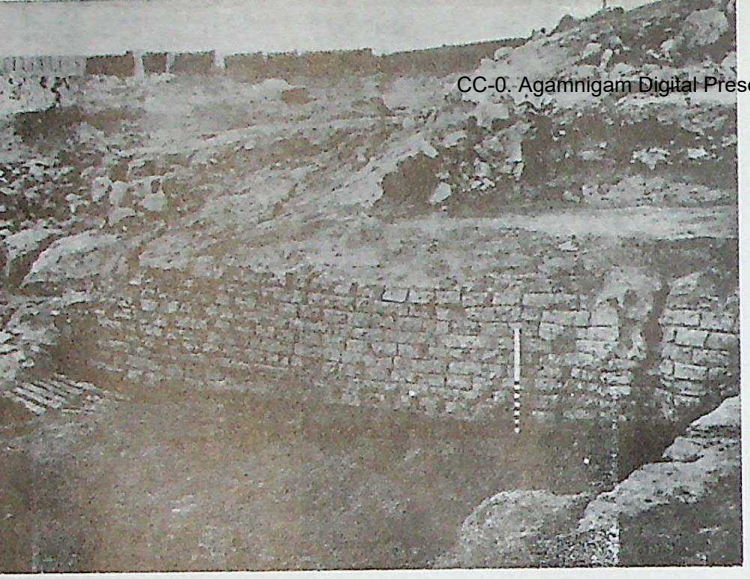

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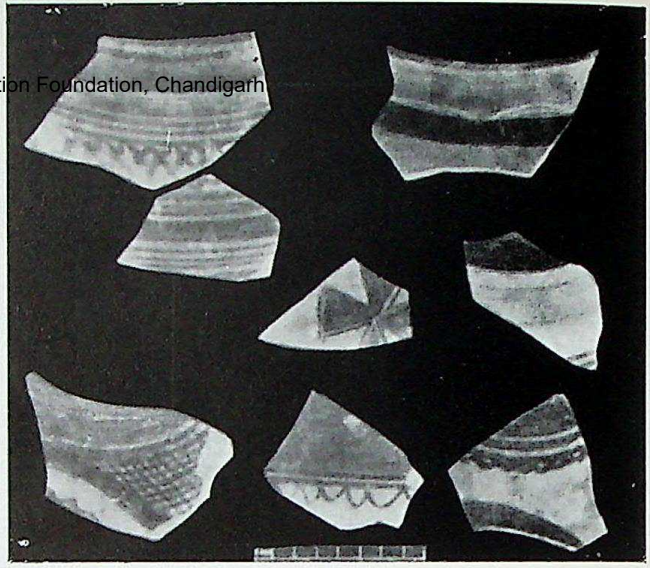

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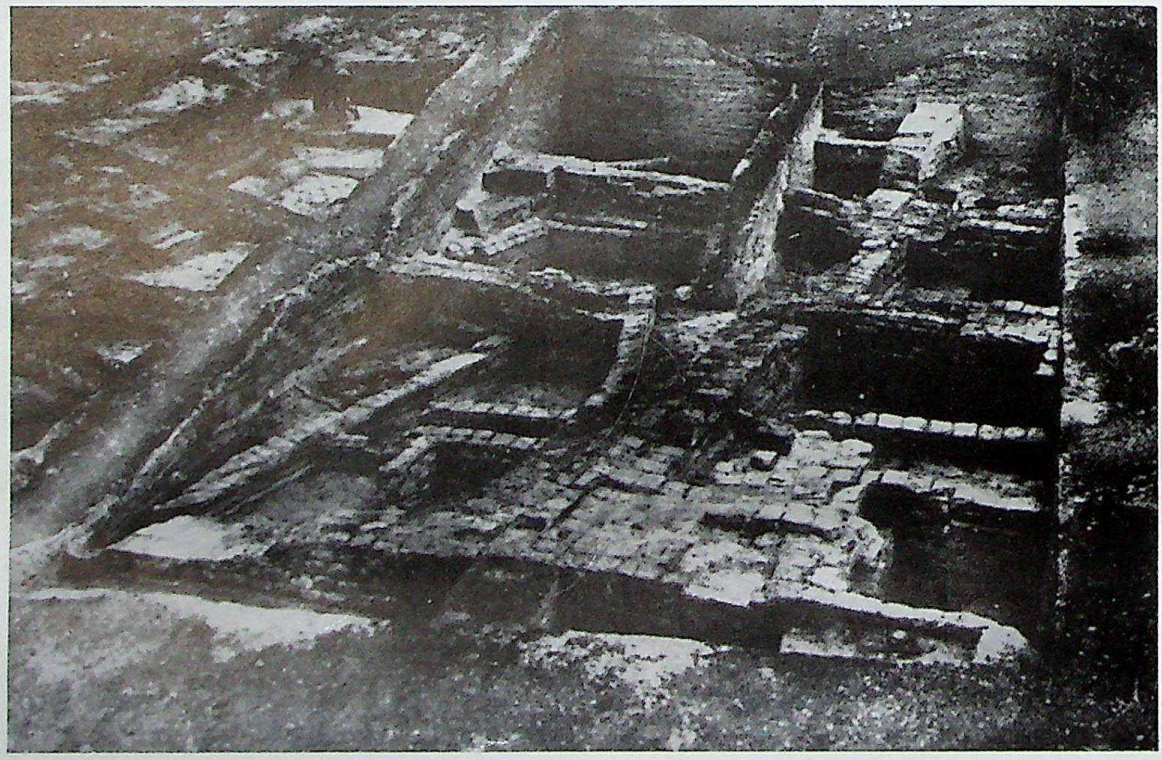

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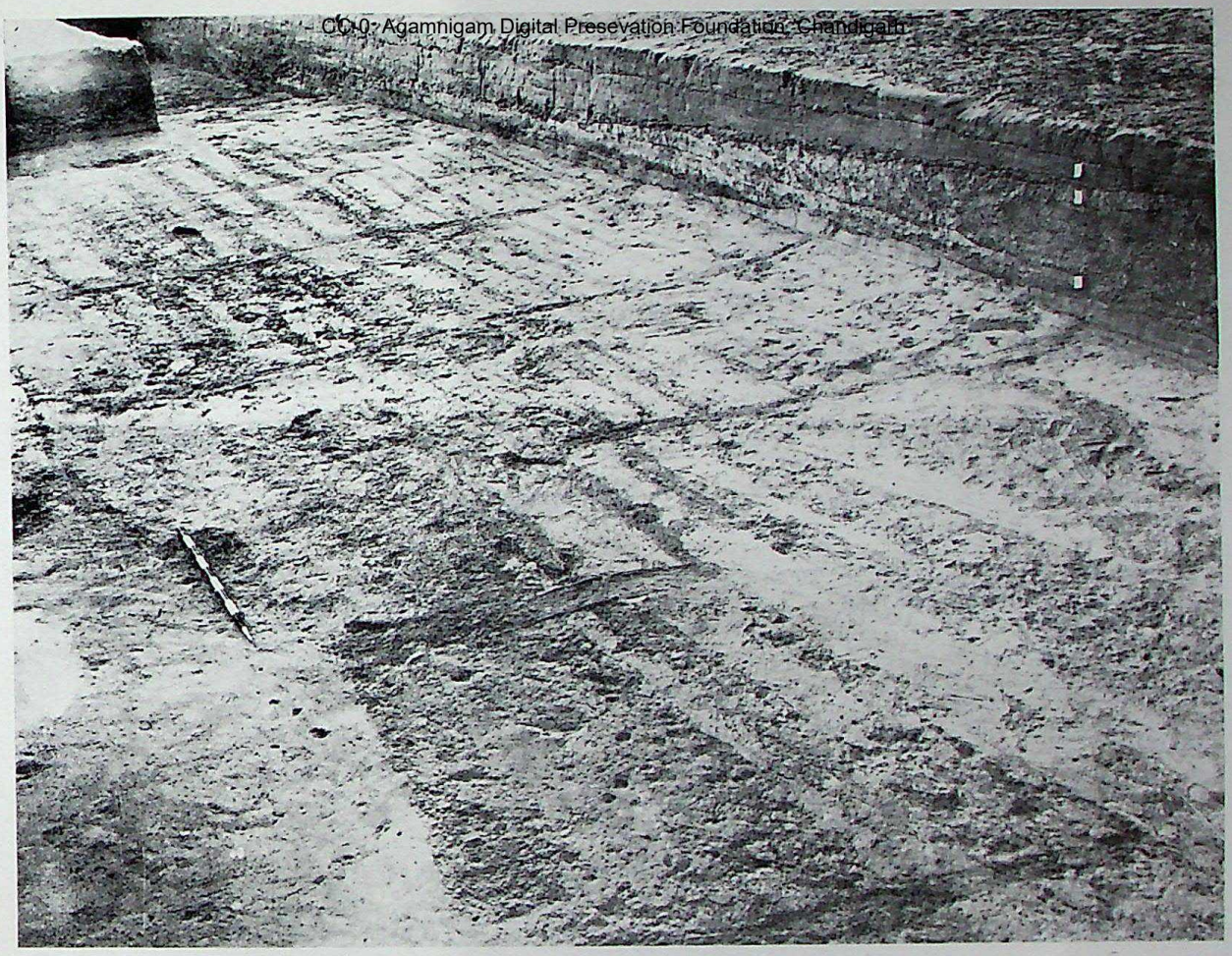

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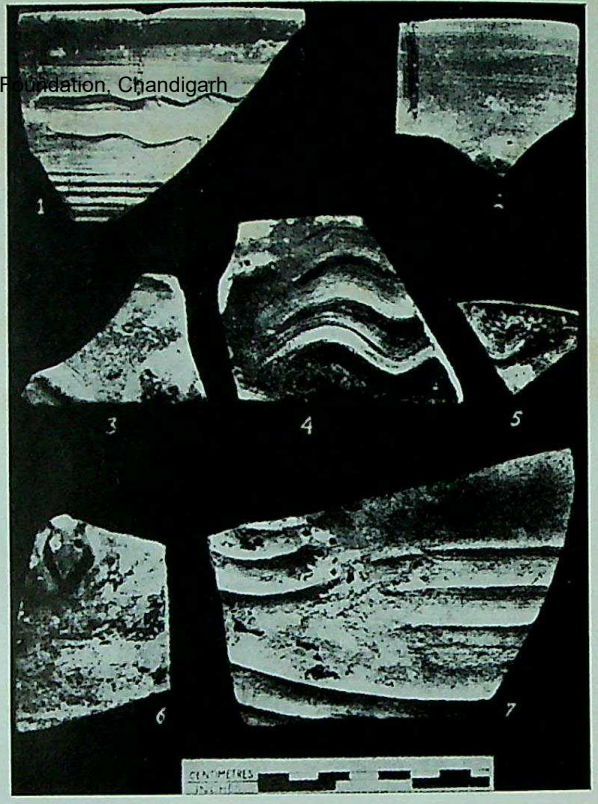


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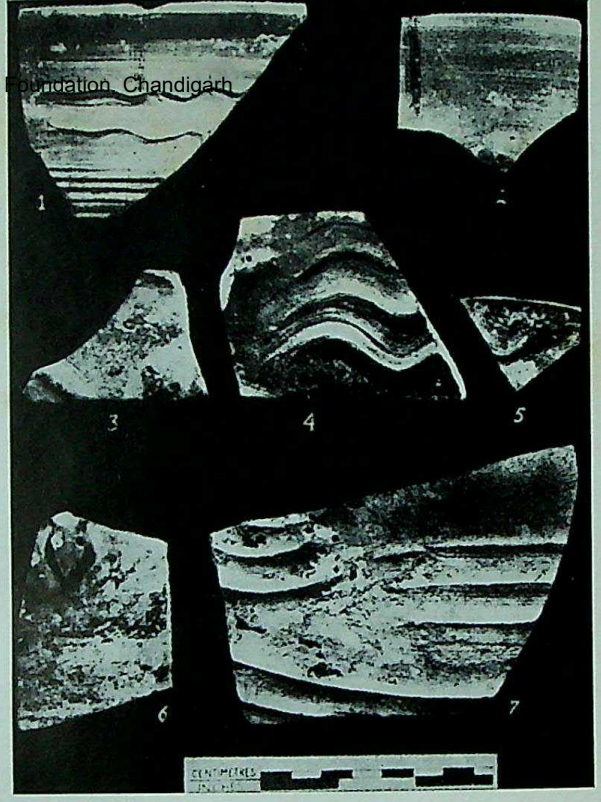


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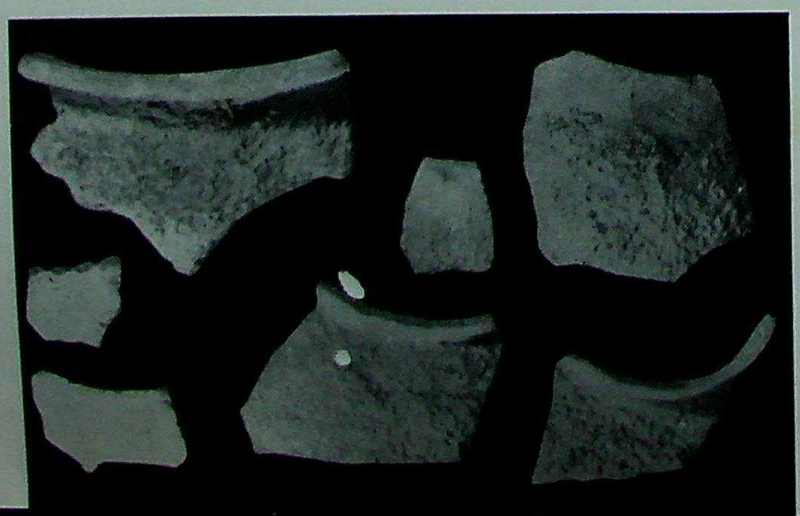

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**Dr. Shashi Asthana** is presently Keeper (Archaeology) in the National Museum, New Delhi. She has published, besides a large number of articles, *The History & Archaeology of India's Contacts with Other Countries (From earliest times to 300 B.C.)*. Recently, she edited, along with B. B. Lal and S. P. Gupta, the *Frontiers of the Indus Civilization*—Sir Mortimer Wheeler Commemoration Volume.

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